Maryland Historical Trust

Maryland Inventory of Historic Properties number: M-229. MIHP# M:23-128

Name: BRIGHTON DAM RD. OVER TRIBUTARY OF PHILADELPHIA RESERVOIR

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended ___X___ Eligibility Not Recommended _____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: BRIDGE REHABILITATED IN 1999.

Reviewer, OPS: Anne E. Bruder Date: 3 April 2001

Reviewer, NR Program: Peter E. Kurtze Date: 3 April 2001

CAPSULE SUMMARY SHEET

Survey No.: M:23-128 **Construction Date:** 1941 - 1943

Name: Brighton Dam Road Bridge and Dam

Location: Brighton Dam Road over the Patuxent River, Howard and Montgomery Counties

Public/Bridge and Dam/Occupied/Good/Restricted Access

Description:

The Brighton Dam Road Bridge (Bridge # M229, MHT # M:23-128), constructed from 1941 to 1943, is a reinforced concrete slab bridge integrated with a reinforced concrete, flat-slab buttress dam spanning the Triadelphia Reservoir, an impoundment of the Patuxent River 20.92 kilometers (13 miles) upstream from Laurel, Maryland. The bridge and dam were designed and built as a unit by the Ambursen Construction Corporation. The dam is built according to typical Ambursen flat-slab buttress configuration: vertical buttresses built on bedrock are connected by an inclined upstream flat-slab. The dam has three sections: the center spillway, a buttressed concrete bulkhead on either side of the spillway, and an earth embankment joining the dam to the river valley. The roadway bridge, built at the crest of the dam, is a 30-span reinforced concrete slab bridge, consisting of simple spans 6.09 meters (20 feet) in length, with a total bridge length of 182.88 meters (600 feet). The clear roadway with is 7.92 meters (26 feet), with a .94 meter (3.11 foot) sidewalk on the north side and a .51 meter (1.7 foot) brush curb on the south side. The bridge is integrated into the dam structure; the superstructure is supported by piers which extend from the dam buttresses. The bridge slab is secured by reinforcement to these buttress-piers which are 6.09 meters (20 feet) on center. There are solid, paneled concrete parapets on both sides of the bridge. These parapets are part of the original design. Each span features 6.09 meter (20 foot) parapet panels with simple rectilinear ornamentation. There are simply articulated endposts above each pier, at the end of the parapet panel; between the endposts there are two recessed rectangular panels with beveled edges. The parapets are .91-1.21 meters (3-4 feet) high and 20.32 centimeters (8 inches) deep.

Significance:

The Brighton Dam Road Bridge (Bridge # M229, MHT # M:23-128) was determined eligible for the National Register of Historic Places in November 1995. The dam, constructed to provide the water needed to serve the Washington, D.C. suburbs, is a resource which represents an early period of regional planning, and it was the first large water project undertaken by the Washington Suburban Sanitary Commission. The dam is also an intact example of a reinforced concrete, flat-slab, buttress dam designed and constructed by the Ambursen Construction Corporation. The bridge and the dam are located on land originally known as the "Addition to Brooke Grove" or "Brooke's Addition." The earliest reference to the location is an October 1829 deed in which Amelia Stutson conveyed the land to Walter Carr. The Carr family sold the property to James Brown in April 1852. The land was owned by the Brown family until 1917, when property on both sides of the river had a succession of owners. The Washington Suburban Sanitary Commission began purchasing land along the Patuxent River in 1941, and currently it owns and maintains approximately 809.4 hectares (2000 acres) of land around the Triadelphia Reservoir.

Maryland Comprehensive Historic Preservation Plan Data Sheet

Brighton Dam Road Bridge and Dam (Bridge # M229, MHT # M:23-128)
Brighton Dam Road over the Patuxent River, Howard and Montgomery Counties

Historic Context:

MARYLAND COMPREHENSIVE PRESERVATION PLAN DATA

Geographic Organization:

Piedmont

Chronological/Developmental Period(s):

Modern Period A.D. 1930-Present

Prehistoric/Historic Period Theme(s):

Architecture, Landscape Architecture, and Community Planning; Transportation

RESOURCE TYPE:

Category (see Section 3 of survey form):

Structure; Public Ownership; Public Acquisition - Not applicable; Occupied; Restricted Access; Transportation, Dam

Historic Environment (urban, suburban, village, or rural):

Rural

Historic Function(s) and Use(s):

Bridge and Dam

Known Design Source (write none if unknown):

Ambursen Construction Corporation, New York and Boston

Survey No. M:23-128

Maryland Historical Trust
Maryland Inventory of Historic Properties Form
Brighton Dam Road Bridge Rehabilitation Project

DOE ___yes ___no

1. Name: (indicate preferred name)

historic Brighton Dam Road Bridge and Dam

and/or common N/A

2. Location:

street & number Brighton Dam Road over Patuxent River _n/a_ not for publication

city, town Brookeville _x_ vicinity of congressional district

state Maryland county Montgomery

3. Classification:

Category	Ownership	Status	Present Use	
___district	_x_public	_x_occupied	___agriculture	___museum
___building(s)	___private	___unoccupied	___commercial	___park
_x_structure	___both	___work in progress	___education	___private
___site	**Public Acquisition**	**Accessible**	___entertainment	___residence
___object	___in process	_x_yes: restricted	___government	___religious
	___being considered	___yes: unrestricted	___industrial	___scientific
	_x_not applicable	___no	___military	_x_other: dam
			_x_transportation	

4. Owner of Property: (give names and mailing addressed of all owners)

name Washington Suburban Sanitary Commission

street & number 14501 Sweitzer Lane telephone no.: (301) 206-8000

city,town Laurel state and zip code Maryland 20707

5. Location of Legal Description

Land Records of Montgomery County liber 858

street & number Montgomery County Judicial Center folio 213

city,town Rockville state Maryland

6. Representation in Existing Historical Surveys

title Maryland Inventory of Historic Bridges

date August 1995 ___federal _x_state ___county ___local

depository for survey records Maryland Historical Trust

city,town Crownsville state Maryland

7. Description

Survey No. M:23-128

Condition		Check one	Check one	
___excellent	___deteriorated	___unaltered	_x_original site	
___good	___ruins	_x_altered	___moved	date of move _____
___fair	___unexposed			

Resource Count: 1
Prepare both a summary paragraph and a general description of the resource and its various elements as it exists today.

The Brighton Dam Road Bridge (Bridge # M229, MHT # M:23-128), constructed from 1941 to 1943, is a reinforced concrete slab bridge integrated with a reinforced concrete, flat-slab buttress dam spanning the Triadelphia Reservoir, an impoundment of the Patuxent River 20.92 kilometers (13 miles) upstream from Laurel, Maryland. The bridge and dam were designed and built as a unit by the Ambursen Construction Corporation.

Brighton Dam is built according to typical Ambursen flat-slab buttress configuration: vertical buttresses built on bedrock are connected by an inclined upstream flat-slab. The dam has three sections: the center spillway, a buttressed concrete bulkhead on either side of the spillway, and an earth embankment joining the dam to the river valley. The roadway bridge is built at the crest of the dam. The bridge is integrated into the dam structure; the superstructure is supported by piers which extend from the dam buttresses. The bridge slab is secured by reinforcing to these buttress-piers which are 6.09 meters (20 feet) on center.

Brighton Dam Road is a two lane, county highway with a western terminus at Main Street in Brookeville, Montgomery County, and an eastern terminus at Ten Oaks Road in Clarksville, Howard County. The bridge carrying the road over the dam is a 30-span reinforced concrete slab bridge, consisting of simple spans of 6.09 meters (20 feet) length, with a total bridge length of 182.88 meters (600 feet). The clear roadway width is 7.92 meters (26 feet), with a .94 meter (3.11 feet) sidewalk on the north side and a .51 meter (1.7 foot) brush curb on the south side. There are solid, paneled concrete parapets on both sides of the bridge. These parapets are part of the original design. Each span features 6.09 meter (20 foot) parapet panels with simple rectilinear ornamentation. Above each pier, at the end of the parapet panel there are simply articulated endposts; between the endposts there are two recessed rectangular panels with beveled edges. The parapets are .91-1.21 meters (3-4 feet) high and 20.32 centimeters (8 inches) deep. The downstream side of the bridge has a chainlink fence attached to the parapet between buttresses 6 and 12.

The downstream (southeast) side of the bridge and roadway projects .61 meters (2 feet) beyond the buttresses to accommodate a reinforced concrete parapet. The upstream (northwest) side of the bridge and roadway projects 1.52 meters (5 feet) beyond the buttresses to accommodate a reinforced concrete parapet and sidewalk. The buttresses function as solid shaft piers; they have hammerhead projections to support the portions of the superstructure which project beyond the buttresses.

There is no lighting on the bridge. Construction drawings illustrate a staggered lighting plan, showing light standards spaced 35.58 meters (120 feet) apart. There are fasteners and a conduit for light standards on every sixth endpost on both the upstream and downstream parapets. The endposts have a recessed area for the light standard base, a conduit, four bolts, and a removable pullbox panel cover to service the wiring. The lighting plan is staggered; a light standard on one side of the road is directly opposite the midpoint between two light standards on the other side of the road.

The Brighton Dam is 19 meters(62.4 feet) high and 303 meters (995 feet) long, and comprises earth embankments and a reinforced concrete structure. The concrete portion of the dam is 182.88 meters (600 feet) long; it consists of a central spillway section which is flanked by bulkhead sections. Brighton Dam has thirty-one buttresses evenly spaced at 6.09 meters (20 feet) along its 182.88 meter (600 foot) length; they are connected by the upstream inclined flat-slab, built at approximately a 50 degree angle. The dam has a thirteen bay spillway 79.25 meters (260 feet)

7. Description (Continued)

long located between buttress 12 and buttress 25, with numbers starting at 1 on the west side of the dam. Each spillway bay has a tainter gate (a spillway gate with a cylindrical face used to control the level of the reservoir) 4.57 meters (15 feet) high and 5.49 meters (18 feet) wide.

The dam has an intake tower on the upstream side between buttresses 11 and 12 which is accessed from a walkway along the spillway above the tainter gates. The tower has six valve indicators, three steel manhole covers, and a steel pipe railing around the perimeter.

A powerhouse is located in the bay between buttress 11 and buttress 12. The powerhouse is two stories, with a third story addition; it is of reinforced concrete construction. The powerhouse was designed and used to generate electricity for the use of the dam, including generating power for the bridge lights.

Access to the powerhouse and the spillway walkway above the tainter gates is from a structural steel stairway between buttresses 10 and 11. The spillway walkway is located approximately 2.44 meters (8 feet) above the normal pond level. The walkway contains a track with four gasoline powered hoists, with chains to lift the tainter gates. The hoists have a backup electrical power supply for emergency use. The walkway in enclosed on the upstream side by a chainlink fence and corrugated fiberglass. A steel pipe railing runs the entire length of the walkway on the downstream side.

There are five aluminum sided buildings between buttresses at grade southwest of the powerhouse. These buildings are used for storage and maintenance. The dam has a concrete retaining wall on each bank of the river; a parking area and service road are located on the southwest river bank.

The Triadelphia reservoir is 8.85 kilometers (5.5 miles) in length, with an average depth of 9.14 meters (30 feet) and a maximum depth of 18.29 meters (60 feet); it has a storage capacity of approximately 26.50 million liters (7 billion gallons) of water.

Brighton Dam is located in the Patuxent River valley 29.92 kilometers (13 miles) upstream from Laurel, Maryland. The land is steeply sloped on both banks, more so on the northeast bank. The Washington Suburban Sanitary Commission (WSSC) has established a public picnic area immediately downstream from the dam on the southwest bank. A small Paulownia tree plantation is located on the southwest bank of the river, on the slope between the dam embankment and the powerhouse service road. The Brighton Azalea Gardens are located in a section of hardwood forest northwest of the dam. The gardens were located at Brighton Dam in 1962, and are maintained by the WSSC Watershed Staff. The WSSC permits fishing and boating on the reservoir, and picnicking, horseback trail riding, and hunting on the watershed property.

8. Significance

Survey No. M:23-128

Period	Areas of Significance—Check and justify below				
__prehistoric	__archaeology-prehistoric	__Community planning	__landscape architecture	__religion	
__1000-1499	__archeology-historic	__conservation	__law	__science	
__1500-1599	__agriculture	__economics	__literature	__sculpture	
__1600-1699	__architecture	__education	__military	__social/ humanitarian	
__1700-1799	__art	x_engineering	__music	__theater	
__1800-1899	__commerce	__exploration/settlement	__philosophy	__transportation	
x_1900-	__communication	__industry	__politics/government	__other (specify)	
		__invention			

Specific dates 1941-1943 **Builder/Architect Ambursen Construction Corporation**

check: Applicable Criteria: _x_A ___B _x_C ___D
and/or
Applicable Exceptions: ___A ___B ___C ___D ___E ___F ___G

Level of Significance: ___national _x_state ___local

Prepare both a summary paragraph of significance and a general statement of history and support.

Brighton Dam Road Bridge (Bridge # M229, MHT # M:23-128) and Dam, constructed from 1941 to 1943, is located on the Patuxent River 20.92 kilometers (13 miles) upstream from Laurel, Maryland. The bridge was determined eligible for the National Register of Historic Places in November 1995. The dam, constructed to provide the water needed to serve the Washington, D.C. suburbs, is a resource which represents an early period of regional planning, and it was the first large water project undertaken by the Washington Suburban Sanitary Commission. The dam is also an intact example of a reinforced concrete, flat-slab, buttress dam designed and constructed by the Ambursen Construction Corporation. The bridge and the dam are located on land originally known as the "Addition to Brooke Grove" or "Brooke's Addition." The earliest reference to the location is an October 1829 deed in which Amelia Stutson conveyed the land to Walter Carr. The Carr family sold property to James Brown in April 1852. The land was owned by the Brown family until 1917, when the property on both sides of the river had a succession of owners. The Washington Suburban Sanitary Commission began purchasing land along the Patuxent River in 1941, and it currently owns and maintains approximately 809.4 hectares (2000 acres) around the Triadelphia Reservoir.

Background History of the Area

The bridge and dam are located in a rural and agricultural area of Howard and Montgomery counties. During the 18th and 19th centuries, settlement gradually increased, and grains became the predominant agricultural product of the upper Patuxent region. Mills were established to process corn and grain. Grist mills were established on the upper Patuxent and its tributaries at Roxbury (Route 97 and Cattail Creek), Howard's Mill (Cattail Creek and the Patuxent, now under Triadelphia Reservoir), and Gaither's Lower Mill (Green Bridge and the Patuxent, also under the reservoir). The village of Triadelphia, on the Patuxent River, was founded in 1806. A grist mill, flour mill, lime kiln, and cotton factory were subsequently established and remained in operation until floods destroyed the village in the 1860s. Triadelphia was abandoned in the 1880s (Cramm 1987: 116).

During the nineteenth century, the transportation network of the region expanded: a turnpike from Elk Ridge Landing on the Patapsco River to Triadelphia began construction in 1816, the Union Turnpike (now MD 97) was built west of Triadelphia in 1849, and two bridges across the Patuxent were built by 1860. The construction of the Baltimore and Ohio (B & O) Railroad in the 1830s had a tremendous impact. Small crossroads were transformed into commercial centers by the presence

8. Significance (Continued)

of the railroad, and once-busy towns, bypassed by the railroad, declined proportionately (Hiebert & MacMaster 1976: 108). In the 1870s and 1880s, the Metropolitan Branch of the B & O, the Baltimore and Potomac (B & P) Railroad, and streetcar lines were constructed, expanding the Washington transportation network. By 1900, suburbs had begun to take shape along four separate transportation routes into the District of Columbia from Montgomery and Prince George's counties.

Twentieth Century Suburban Growth and Public Utilities

These linear development patterns affected public utilities. A lack of connecting roads between the four suburban areas made travel difficult. To travel from one suburban area to another, it was necessary to travel through Washington, D.C. (Brigham 1988: 5). Public utility coordination among the suburbs was also minimal. Each municipality had its own independent water and sewer system. Some communities had municipal water and sewer systems; other communities relied upon private companies for utilities. The majority of suburban Maryland residents used wells for water and cesspools for waste disposal. As the suburban population increased, the burden on the existing water and sewer systems increased. The existing systems were inadequate to handle the new demands, and they had not been built to expand. As a result, raw sewage was discharged directly into streams and rivers, polluting waterways in Maryland and Washington and resulting in impure water. Improper engineering practices, such as the installation of drains which were too shallow, also created problems. The potential for contagious disease and pollution became an increasing concern for District of Columbia officials. Community safety was also at risk due to inadequate water for fire protection (Brigham 1988: 6).

Increased mortality from tuberculosis and typhus during the second decade of the twentieth century prompted the Maryland State Department of Health to document unsafe sanitary conditions and practices. Surveys in 1910 and 1911 by the Department noted many communities' water supplies were adjacent to streams used for sewage disposal, and sewage from some communities was polluting the water supply for others. These and other findings led to the establishment of the Bureau of Sanitary Engineering in 1912. The Bureau examined solutions to the problems of water supply and pollution control (Brigham 1988: 6-7).

The Washington Suburban Sanitary Commission (WSSC)

While the State of Maryland was studying suburban water and sewerage problems, the Commissioners of the District of Columbia, alarmed by pollution from Maryland, presented complaints to the United States Congress. This action led to the establishment of a commission by Maryland to work with a similar District commission to determine feasible methods of sewage disposal (Brigham 1988: 7). In 1914 the Maryland Commission recommended the creation of a "Sewerage Commission" for Montgomery and Prince George's counties, and legislation for this commission was introduced in the Maryland General Assembly. After some delay, the Washington Suburban Sanitary Commission (WSSC) was created in 1918.

The role of the WSSC was to connect the sanitary systems of Montgomery and Prince George's counties to utilize common sources of water and sewage disposal. The commission was given the

8. Significance (Continued)

authority to construct, acquire, operate, and maintain systems of water supply, sewerage, storm drainage, and refuse disposal in Montgomery and Prince George's counties. Before the establishment of the Maryland National Capital Park and Planning Commission, the WSSC also served as the bi-county planning agency (Brigham 1988: 15).

The WSSC began to adapt existing systems and to purchase new suburban municipal water and sewer systems to connect the suburban utilities. By 1925, the WSSC had adapted or purchased new systems in several communities in both counties. To meet the increasing demand for water, a small dam and filtration plant was constructed at Burnt Mills on the Northwest Branch of the Anacostia River. The dam and plant were completed and operational in 1936, and were designed to last "until 1960 and beyond" (Brigham 1988: 17).

Planning and Building Brighton Dam

However, by the end of the 1930s, sedimentation of the Burnt Mills Reservoir, unanticipated population growth, and a severe drought necessitated new water sources. The WSSC considered diverting Patuxent River water to Burnt Mills as needed, and this was begun in 1939. Soon, however, the WSSC announced plans to build a dam on the Patuxent River. Legislation for the dam near Green's Bridge, with a filtration plant at Laurel and a pipeline to the Prince George's County water distribution system at Branchville, was passed in 1941.

The contractor selected for the design and construction of the dam was the Ambursen Construction Corporation of New York. The firm, originally the Ambursen Hydraulic Construction Company of Boston, was founded by Nils Ambursen. Ambursen patented and built the first flat-slab buttress dam in New York in 1903, and this type of dam became identified with his name (Jackson 1995: 31). By 1910 the firm had over a dozen patents for the Ambursen reinforced concrete flat-slab, buttress dam. The design consists of a series of vertical buttresses, which can be spaced from 4.57-21.33 meters (15-70 feet) apart, connected by an upstream, inclined slab. The buttresses are supported directly on bedrock. On the downstream side this type of dam appears to be a series of vertical walls (Jackson 1988: 50). Ambursen's flat-slab buttress dam utilized a reinforced concrete parabolic-shaped spillway section for a gradual flow of water, and a series of reinforced concrete buttresses which transferred water pressure loads to the dam's foundation (Ambursen 1908: 5; and Jackson 1988: 50). By 1940 the firm had constructed dams in New England, New York, Pennsylvania, Wyoming, California, and on the Patapsco River near Ilchester, Maryland. The dam at Ilchester, completed by 1906, features a powerhouse located within the spillway walls. After the completion of Brighton Dam, the Ambursen firm built a second Patuxent River dam at Rocky Gorge. This dam, named for the principal founder of the WSSC, T. Howard Duckett, was constructed from 1952 to 1954. The dam is located 8.05 kilometers (5 miles) downstream from Brighton Dam. The designs of Duckett Dam and Brighton Dam are very similar to a typical high bulkhead dam with a contained powerhouse and a highway bridge featured in Ambursen literature (Ambursen 1906: Plate 52).

In preparation for construction of the dam, the WSSC purchased land to be flooded and planned the relocation of highways in the area. The road to Green's Bridge was to be relocated and carried across the dam. The site of the village of Triadelphia was in the area to be flooded by the reservoir, and the Triadelphia bridge was to be abandoned.

8. Significance (Continued)

Construction of the dam began in 1941 but the schedule and cost were immediately affected by labor problems and material shortages brought about by the entry of the United States into the Second World War. E.H. Burroughs, the president of Ambursen, documented the problems in the final construction report. Structural steel was in short supply, and there was a long delay in fabricating the tainter gates. Burroughs also noted that the higher wages offered by war industries, as well as transportation problems created by tire and gasoline rationing, made it difficult to keep skilled workers and transport them to the construction site. In addition, design changes due to unanticipated soil conditions on the site required materials and time resulting in cost overruns (Ambursen 1943: 32-45).

Despite the labor and material problems, and a severe drought in 1942-1943 which drastically reduced the flow of the Patuxent River, the dam and the bridge were completed in 1943; the Patuxent River filtration plant was completed in 1944 and the dam was operational by the summer of 1944. Triadelphia Reservoir was formed with an average depth of 9.14 meters (30 feet) and a maximum depth of 18.29 meters (60 feet). The road from Brighton to Clarksville was rerouted to Brookeville and surfaced with gravel. A bridge integrated with the dam structure carried the road over the dam. Landscaping on the reservoir property continued into 1945 (Brigham 1988: 28).

Brighton Dam continues to be a primary part of suburban Maryland's water system, providing water to WSSC customers in both Montgomery and Prince George's counties. The dam also provides flood control for the Patuxent River Valley. After floods in 1971 and 1972, the water level in Triadelphia Reservoir was lowered .91 meters (3 feet) to provide greater downstream flood protection. Brighton Dam Road is an alternate travel route from western Howard County to upper Montgomery County. The watershed has been established as a recreation area maintained by the WSSC. Azalea Gardens were planted on WSSC property near the dam in 1962, and the property owned by the WSSC around the reservoir was developed as a recreation area in the 1970s. The WSSC permits fishing and boating on the reservoir, and picnicking, horseback trail riding, and hunting on the watershed property. Dam inspections occur every year, and the dam has continued to remain structurally sound.

8. Significance (Continued)

NATIONAL REGISTER EVALUATION

The Brighton Dam Road Bridge, constructed from 1941 to 1943, was determined eligible for the National Register of Historic Places in November 1995. Brighton Dam, constructed during the same period and structurally integrated with the bridge, is also eligible for the National Register under Criteria A and C. Brighton Dam is eligible under Criterion A for its role in the suburban and regional development of Washington, D.C. The growth of the federal government and the resulting suburbanization of Maryland led to the establishment of regional planning authorities to provide and regulate community services. Brighton Dam, constructed to provide the water needed to serve the growing suburban population, is a resource which represents an early period of regional planning, and was the first large water project undertaken by the Washington Suburban Sanitary Commission. Brighton Dam is also eligible under Criterion C. The dam is a reinforced concrete, flat-slab buttress dam of Ambursen design which retains the distinctive characteristics and material integrity of its original design. The structure has not been significantly altered and is in good condition.

MARYLAND HISTORICAL TRUST
Eligibility recommended_____ Eligibility Not Recommended_____
Comments
_____
_____
_____
_____
Reviewer, OPS: _____ Date: _____
Reviewer, NR Program: _____ Date: _____

9. Major Bibliographical References

Survey No. M:23-128

See Continuation Sheet.

10. Geographical Data

Acreage of nominated property 5.7
Quadrangle name Sandy Spring, MD
Quadrangle scale 1:24,000

Verbal boundary description and justification

See Continuation Sheet

List all states and counties for properties overlapping state or county boundaries

state	code	county	code
Maryland	MD	Montgomery	031

state	code	county	code
Maryland	MD	Howard	027

11. Form Prepared By

name/title P.A.C. Spero/Ryan P. McKay, Historic Architect

organization P.A.C. Spero & Company date **December** 1996

street & number 40 West Chesapeake Avenue, Suite 412 telephone (410) 296-1635

city or town Baltimore state Maryland

The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

The survey and inventory are being prepared for information and record purposed only and do not constitute any infringement of individual property rights.

return to: Maryland Historical Trust
DHCP/DHCD
100 Community Place
Crownsville, MD 21032-2023
(410) 514-7600

9. Major Bibliographical References (Continued)

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9. Major Bibliographical References (Continued)

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Maryland-National Capital Park and Planning Commission. Landmarks of Prince George's County.
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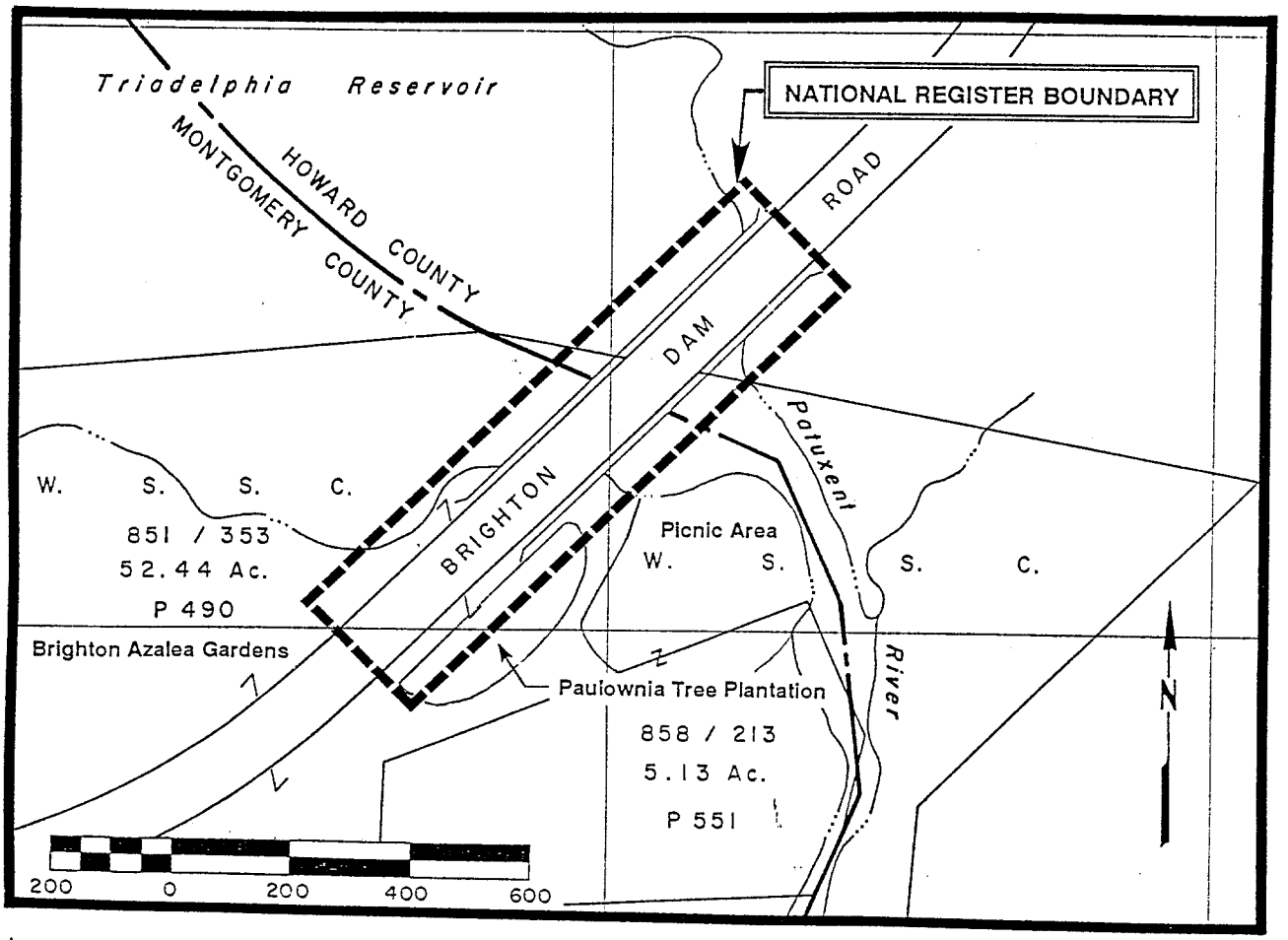
10. Geographical Data (Continued)

Verbal boundary description and justification:

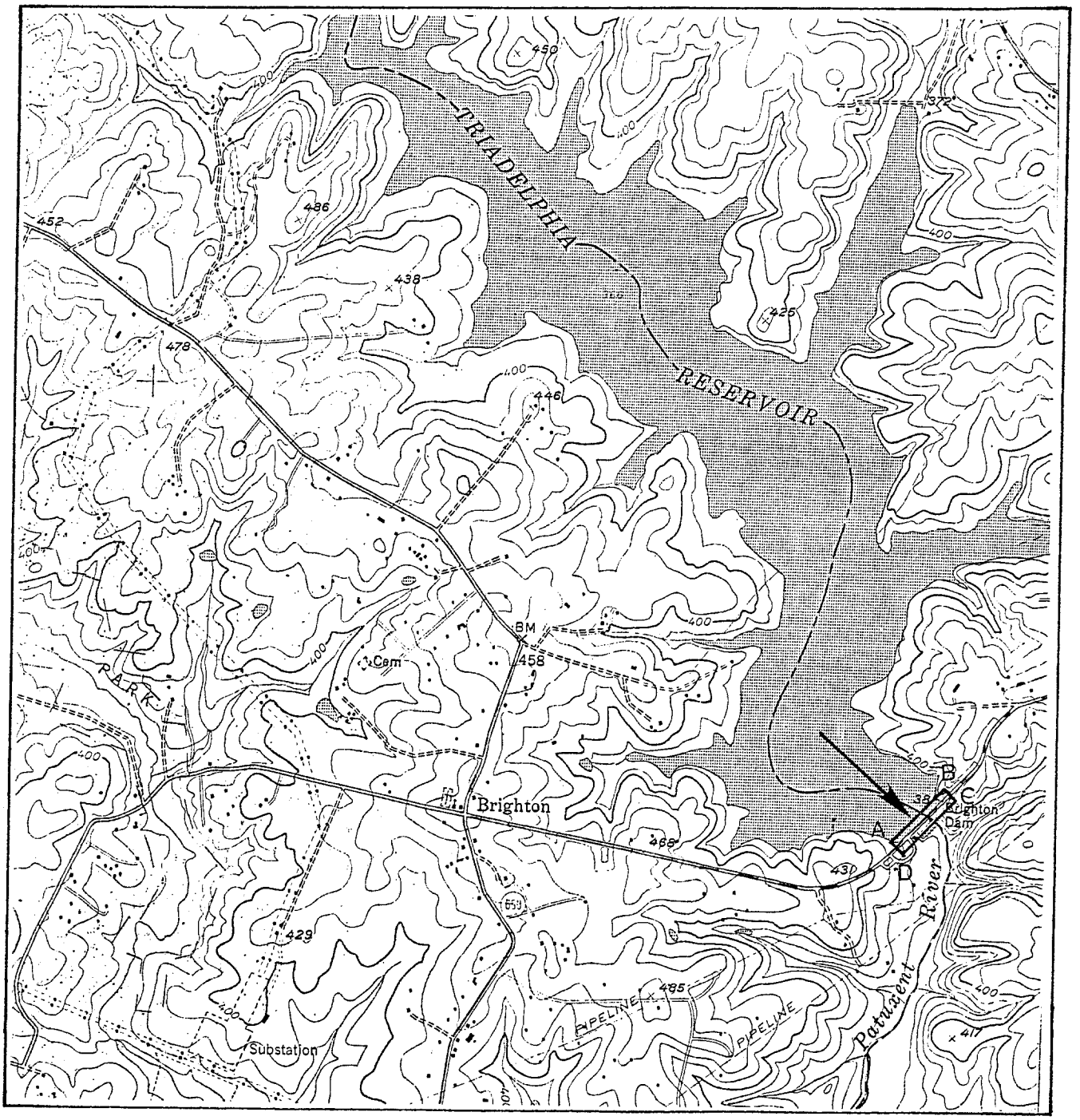
The National Register boundary of Brighton Dam is 303 meters (995 feet) in length, northeast to southwest, and 76.2 meters (250 feet) in width, northwest to southeast. The boundary encompasses the bridge, the dam, the powerhouse service road, and includes the southeast concrete retaining walls and a part of both banks of the river. The boundary is a rectangle which is parallel to the centerline of the bridge and to the centerline of Buttress No. 1. The northwest and southeast boundaries are located 32 meters (105 feet) and 44.2 meters (145 feet) from the bridge centerline, respectively. The northeast and southwest boundaries are located 211.84 meters (695 feet) and 91.44 meters (300 feet) from the centerline of Buttress No. 1., respectively. The boundary has been established to isolate the dam, retaining walls, and its immediate setting from areas that are not associated with the historic period of the dam.

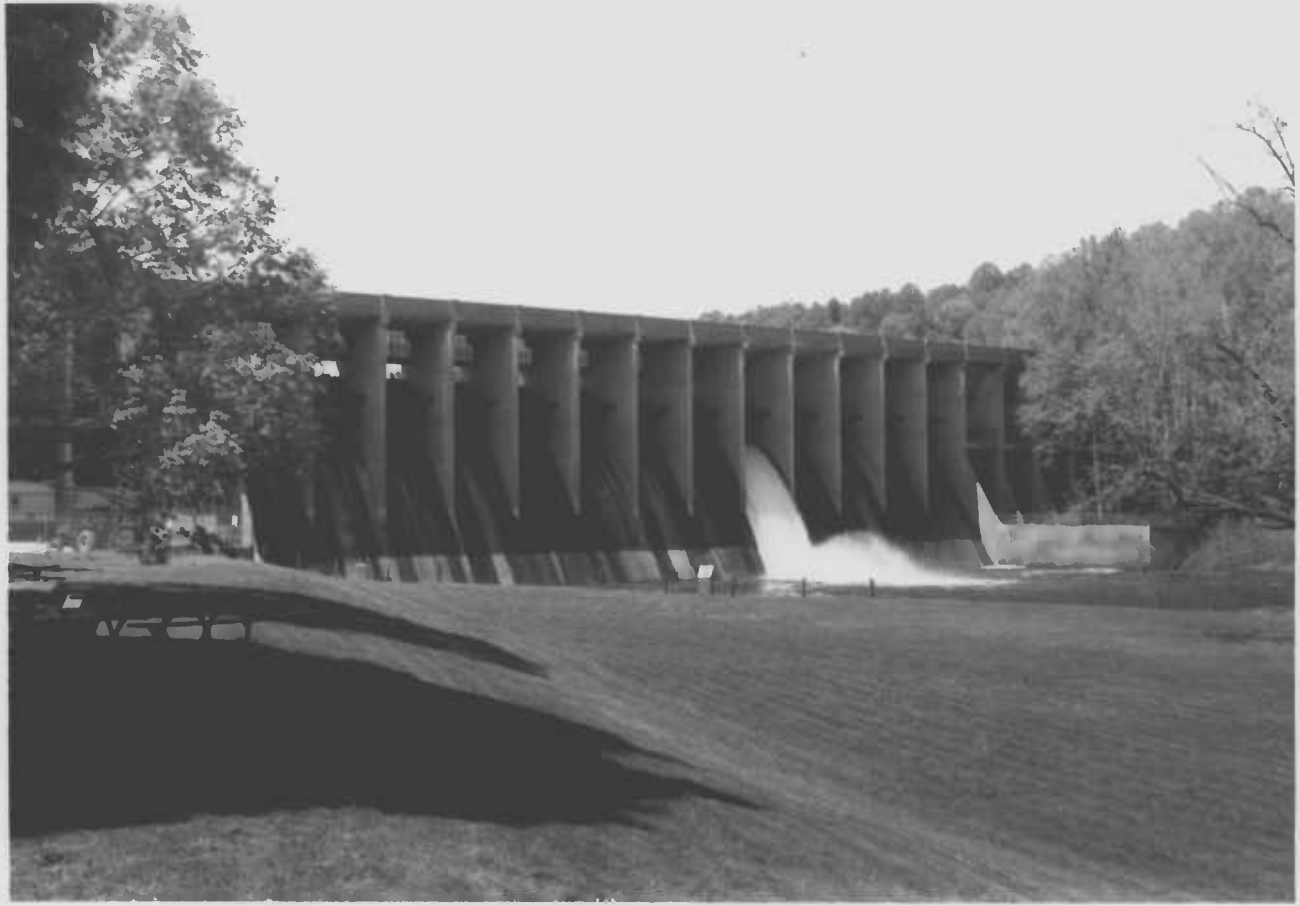
Resource Sketch Map and National Register Boundary Map



10. Geographical Data (Continued)

U.S.G.S. Sandy Spring Quadrangle Map





1. M:23-128
2. Brighton Dam
3. Howard & Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C. Spero & Company
   40 W Chesapeake Ave., Suite 412
   Balto, MD 21204
7. Downstream (SE) side, view north
8. 1 of 11

1. M:23-128
2. Brighton Dam
3. Howard & Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C Spero & Company
   40 W. Chesapeake Ave, Ste 412
   Balto., MD 21204
7. Downstream (SE) side, view east
8. 2 of 11

1. M:23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C. Spero and Company
   40 W. Chesapeake Ave., Ste 412
   Balto., MD 21204
7. Upstream (NW) side, view east
8. 3 of 11

1. M:23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C Spero & Company
   40 W. Chesapeake Ave., Ste. 412
   Balto, MD 21204
7. Upstream (NW) side, View East
8. 4 of 11

1. M:23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C. Spero and Company
   40 W. Chesapeake Ave, Ste. 412
   Balto., MD 21204
7. Upstream (NW) side, view south
8. 5 of 11

1. M: 23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5 May 1996
6. P.A.C. Spero and Company
7. Road Approach, view Southeast
8. 6 of 11

1. M:23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C. Spero and Company
   40 W. Chesapeake Ave., Suite 412
   Balto., MD 21204
7. Road Approach, view northeast
8. 7 of 11

1. M:23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C. Spero and Company
   40 W. Chesapeake Ave., Suite 412
   Balto., MD 21204
7. spillway detail, view northwest
8. 8 of 11

1. M: 23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C Spero and Company
   40 W. Chesapeake Ave, Suite 412
   Balto., MD 21204
7. Spillway Walkway, view northeast
8. 9 of 11

1. M:23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C. Spero and Company
   40 W. Chesapeake Ave, Ste 412
   Balto., MD 21204
7. Parapet detail, view southeast
8. 10 of 11

1. M:23-128
2. Brighton Dam
3. Howard and Montgomery Counties
4. Colin Farr
5. May 1996
6. P.A.C. Spero and Company
   40 W. Chesapeake Ave., Ste 412
   Balto., MD 21204
7. Detail of Spalled Concrete parapet, view north
8. 11 of 11

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. M:23-128

SHA Bridge No. M 229 **Bridge name** Brighton Dam Road over Triadelphia Reservoir

LOCATION:
Street/Road name and number [facility carried] Brighton Dam Road

City/town Brighton **Vicinity** X

County Montgomery

This bridge projects over: Road____ **Railway**_____ **Water** X **Land** ____

Ownership: State _____ **County** X **Municipal** _____ **Other** _____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes _____ **No** X
National Register-listed district ____ **National Register-determined-eligible district** __
Locally-designated district _____ **Other** _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ **Truss -Covered** ___ **Trestle** ____ **Timber-And-Concrete** ___

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge ____:
Swing _____ **Bascule Single Leaf** __ **Bascule Multiple Leaf** _____
Vertical Lift _____ **Retractile**_____ **Pontoon** _____

Metal Girder_____:
Rolled Girder _____ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X:
Concrete Arch_____ **Concrete Slab** X **Concrete Beam** ____ **Rigid Frame** _____
Other _____ **Type Name** _____

M:23-128

DESCRIPTION:

Setting: Urban _____ **Small town** _____ **Rural** ___X___

Describe Setting: Bridge M229 carries Brighton Dam Road over the Triadelphia Reservoir dam, connecting Montgomery and Howard Counties. The Triadelphia Reservoir is an impoundment of the Patuxent River used to supply water to the Washington suburbs. It is approximately 5.25 miles long, and is capable of holding up to 25 million gallons. The lake is used for recreation, in addition to water supply services. The reservoir is surrounded by wooded areas. The road runs in an east-west direction, while the Patuxent River flows from the north to the south.

Describe Superstructure and Substructure:

Brighton Dam Road is the result of the relocation of the Greens Bridge Road. Greens Bridge Road was purposely flooded during the creation of the Triadelphia Reservoir. The Brighton Dam Road is an inter-county public road. The Brighton Dam Bridge, built in 1941-1944, consists of 30 spans at 20 feet each for a total bridge length of 600 feet. There is an earth embankment area of 300 feet at the south approach and an earth embankment area of 95 feet at the north approach. The bridge is currently posted for a live load restriction of 10 tons.

The superstructure, consisting of the roadway, the concrete slab and the parapets, are in generally fair condition. The clear roadway width is 26' with a 3'-11" sidewalk on the north side and a 1'-7" brush curb on the south side. Concrete parapets are on both sides of the bridge. Each span is composed of a 16" thick reinforced concrete slab. The concrete in the top of the sidewalk, slab and both parapets exhibit heavy deterioration in numerous areas. In these areas, the concrete is heavily spalled with voids in the concrete and exposed corroded reinforcing bars in each parapet, sidewalk and slab. The voided areas in the top of the slab has been filled with asphalt. Cracks with efflorescence, rust stains and hollow sounding areas are in the underside of the top slab.

The substructure consists of concrete hammerhead piers and concrete cantilever abutments, and is considered to be in fair condition. The piers were previously repaired in 1978 for spalls and cracks. Many of these repairs have broken down, the repaired concrete has popped-out and some of the cracks have reopened. The cantilever ends of the piers, which support portions of the deck, have suffered severe deterioration with heavy spalled areas, cracks in the concrete with efflorescence and rust stains. The concrete at the upper portion of the piers, in between the cantilever ends, has the same type of deterioration as the cantilever ends, though not as severe.

Discuss Major Alterations:

Cracking and spalling of the piers were repaired in 1978.

HISTORY:

WHEN was the bridge built: 1941-1944

This date is: Actual ___X___ **Estimated** _____

Source of date: Plaque ____ **Design plans** ___ **County bridge files/inspection form** X

Other (specify)

WHY was the bridge built?

The Brighton Dam bridge was built as a part of the Triadelphia Reservoir construction for the purpose of supplying water to the Washington D.C. suburbs.

WHO was the designer?

Unknown

WHO was the builder?
Unknown

WHY was the bridge altered?
No major alteration has occurred to the bridge since its construction. Minor repairs were made to the substructure of the bridge in 1978 to extend the life of the bridge.

Was this bridge built as part of an organized bridge-building campaign?
No, this road and bridge replaced Greens Bridge Road after the creation of the Triadelphia Reservoir, and were planned specifically for this project.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events X **B- Person** _____
C- Engineering/architectural character X

Was the bridge constructed in response to significant events in Maryland or local history?
Reinforced concrete slab bridges are a twentieth century structure type, easily adapted to the need for expedient engineering solutions. Reinforced concrete technology developed rapidly in the early twentieth century with early recognition of the potential for standardized design. The first U.S. attempt to standardize concrete design specifications came in 1903-1904 with the formation of the Joint Committee on Concrete and Reinforced Concrete of the American Society of Civil Engineers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commissions establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic , with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. the number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's. Most improvements to local roads waited until the years after World War II.

Technology and engineering made great advances in the years surrounding World War II. A growing government and expanding war-related industries of this era created a development and housing boom across the county and around Washington D.C. This reservoir and bridge was designed to supply water to the growing Washington D.C suburbs of the 1940's.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?
No, this bridge did not have a significant impact on the growth of the immediate area. However, this reservoir complex did allow for the growth of the Washington D.C. suburbs by supplying water to the growth areas.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?
Yes, this area is potentially eligible for historic designation as the Triadelphia Reservoir district, with the Brighton Road Bridge a significant and integral feature of the district.

Is the bridge a significant example of its type?
Yes, this structure is a significant example of World War II era engineering as part of the Triadelphia Reservoir.

Does the bridge retain integrity of important elements described in Context Addendum?
This bridge retains historic integrity of location, design, setting, materials, workmanship, feeling and association. It possesses integrity of all its major components.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?
Yes, the Brighton Road Bridge is a significant example of World War II era engineering as part of the Triadelphia Reservoir.

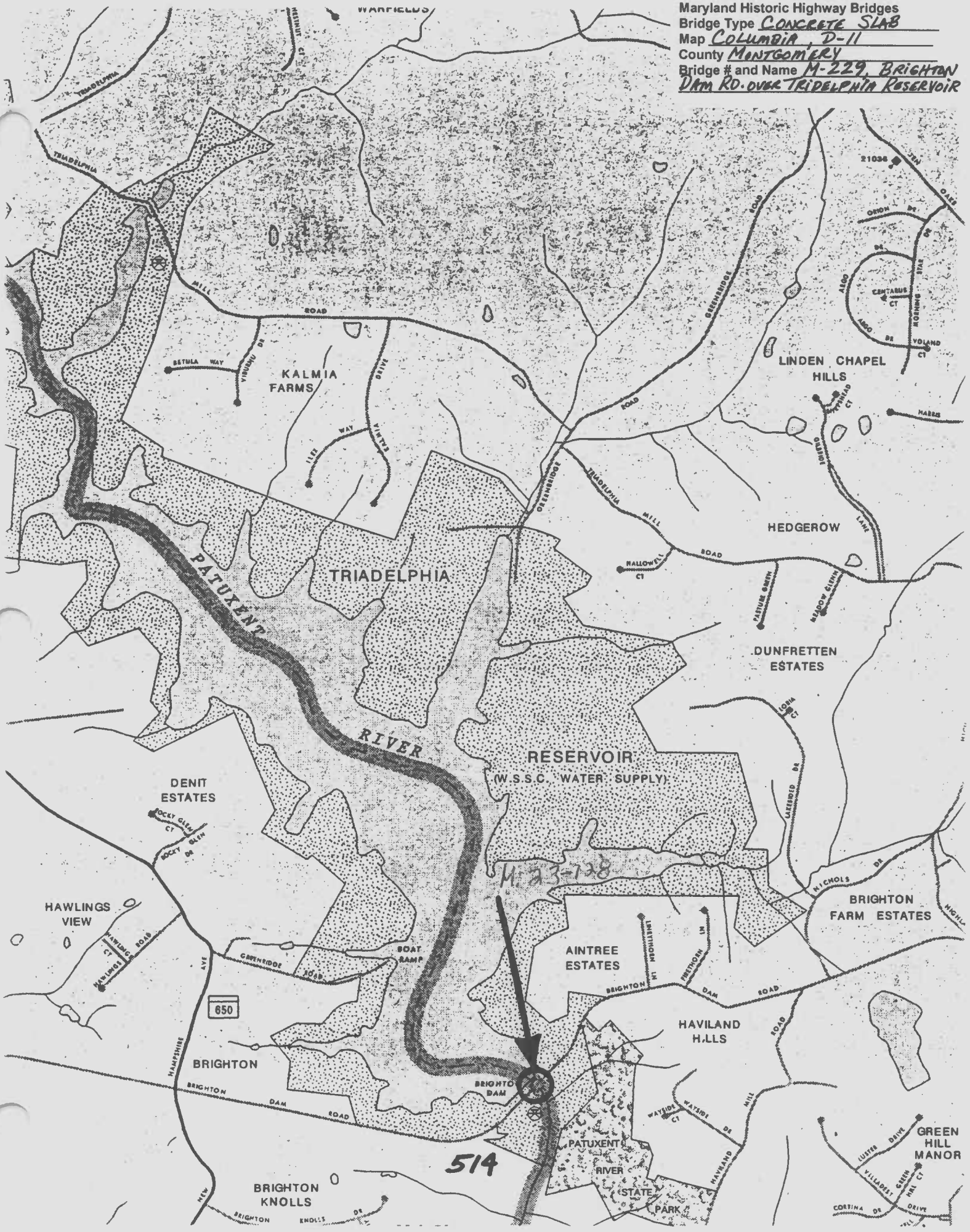
Should the bridge be given further study before an evaluation of its significance is made?
No further evaluation is necessary to determine National Register significance. However, additional research concerning the history of this bridge and its relationship to the surrounding landscape may be useful in providing a more complete picture of the bridges background.

BIBLIOGRAPHY:

County inspection/bridge files X **SHA inspection/bridge files** _____
Other (list):
Montgomery County Bridge Inspection Report, 1993.

SURVEYOR:

Date bridge recorded 8/95
Name of surveyor Leo Hirrell
Organization/Address P.A.C. Spero & Company, 40 W. Chesapeake Avenue, Suite 412, Baltimore, MD 21204
Phone number(410) 296-1635 **FAX number**(410) 296-1670


Maryland Historic Highway Bridges
Bridge Type CONCRETE SLAB
Map COLUMBIA, D-11
County MONTGOMERY
Bridge # and Name M-229, BRIGHTON DAM RD. OVER TRIDELPHIA RESERVOIR
WARFIELDS
TRIADELPHIA
MILL ROAD
KALMIA FARMS
BETULA WAY
VIBURNU DR
ILEX WAY
VINTA DRIVE
GREENBRIDGE ROAD
LINDEN CHAPEL HILLS
HARRIS
ORANGE LANE
HEDGEROW
TRIADELPHIA MILL ROAD
HALLOWELL CT
PASTURE GREEN
MEADOW GLEN
PATUXENT RIVER
TRIADELPHIA
DUNFRETTEN ESTATES
LORNA CT
LAKERIDGE DR
RESERVOIR
(W.S.S.C. WATER SUPPLY)
M-23-128
DENIT ESTATES
ROCKY GLEN CT
ROCKY GLEN DR
HAWLINGS VIEW
HAWLINGS CT
HAWLINGS ROAD
GREENRIDGE ROAD
BOAT RAMP
650
HAMPSHIRE AVE
BRIGHTON
BRIGHTON DAM ROAD
BRIGHTON DAM
AINTREE ESTATES
LINKTHORN LN
BRIGHTON DAM ROAD
NICHOLS DR
BRIGHTON FARM ESTATES
HAVILAND HILLS
WAYSIDE CT
WAYSIDE DR
HAVILAND ROAD
PATUXENT RIVER STATE PARK
514
BRIGHTON KNOLLS
BRIGHTON KNOLLS DR
GREEN HILL MANOR
LUSTER DRIVE
VILLADEST CT
GREEN HILL DRIVE
CORTINA DR

Inventory # M:23-128

Name M229 - TRIADELPHIA RESERVOIR BRIGHTON DAM ROVER

County/State MONTGOMERY / MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description APPROACH WEST

Number ~~30~~ 1 of ~~33~~ 4

Inventory # M: 23-128

Name M229 - BRIGHTON DAM RD OVER TRIADELPHIA RESERVOIR

County/State MONTGOMERY / MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description ELEVATION NORTH

Number ~~32~~ 1 of ~~35~~ 4

Inventory # M: 23-128

Name M22a - BRIGHTON DAM RD OVER TRIADELPHIA RESERVOIR

County/State MONTGOMERY / MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SAA

Description ELEVATION SOUTH

Number ~~31~~ 3 of ~~33~~ 4

Inventory # M:23-128

Name M229- BRIGHTON DAM RD OVER TRIADELPHIA RESERVOIR

County/State MONTGOMERY / MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description APPROACH EAST

Number 4 ~~33~~ of ~~33~~ 4

9400122

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

M:23-128

Property/District Name: Bridge No. M-229, on Brighton Dam Rd Survey Number: ~~NO~~

Project: Rehab Bridge No. M-229, B.Dam Rd over Patuxent River Agency: FHWA/Howard County

Site visit by MHT Staff: X no ___ yes Name _____ Date _____

Eligibility recommended X Eligibility not recommended ____

Criteria: X A ___B ___C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Justification for decision: (Use continuation sheet if necessary and attach map)

Based on the available information, Bridge No. M-229, Brighton Dam Road (MD 216) over the Patuxent River straddling Howard and Montgomery counties is eligible for the National Register of the Historic Places as an integral part of Brighton Dam (1941-1943), which is significant under Criterion A for its association with the massive expansion of the hington Metropolitan area during and immediately after World War II. The 600' by 33' dge crosses the gated spillway and bulkhead sections of the 62.4' high, 995' long dam. The bridge and dam are constructed of reinforced concrete. The dam was designed to carry MD 216, which was flooded and relocated as part of the project, and the bridge design is totally integrated with the dam. The divisions of the bridge's paneled parapet walls echo the divisions of the buttressed spillways. The original lamp standards were removed from the bridge in the 1970s, but otherwise the bridge appears as it did when constructed.

Brighton Dam was constucted for the Washington Suburban Sanitary Commission (WSSC) by the Ambursen Engineering Corporation, a firm known for constructing concrete, slab and buttress dams ("the Ambursen type") throughout the country and abroad. The WSSC, a semi-regional agency, was created in 1918 to develop the area's water supply to meet the increasing demand of the rapidly growing population in the Washington Suburban Sanitary District. The need for developing new water supplies was highlighted by a severe drought which had gripped the region through most of the 1930s. According to a March 2, 1942 article in Construction, an existing dam and connections to the Washington water system had been expected to be adequate until 1942, but demand quickly exceeded supplies once the United States entered World War II:

Documentation on the property/district is presented in: Project file

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Prepared by: William R. Maxwell, 3rd., WSSC Project Manager

Elizabeth Hannold March 2, 1994
Reviewer, Office of Preservation Services Date

NR program concurrence: X yes ___ no ___ not applicable

R Lindsay 3/3/94
Reviewer, NR program Date

Survey No. ~~M~~ M: 23-128

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

____	Eastern Shore	(all Eastern Shore counties, and Cecil)
____	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
X	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
____	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

____	Paleo-Indian	10000-7500 B.C.
____	Early Archaic	7500-6000 B.C.
____	Middle Archaic	6000-4000 B.C.
____	Late Archaic	4000-2000 B.C.
____	Early Woodland	2000-500 B.C.
____	Middle Woodland	500 B.C. - A.D. 900
____	Late Woodland/Archaic	A.D. 900-1600
____	Contact and Settlement	A.D. 1570-1750
____	Rural Agrarian Intensification	A.D. 1680-1815
____	Agricultural-Industrial Transition	A.D. 1815-1870
____	Industrial/Urban Dominance	A.D. 1870-1930
X	Modern Period	A.D. 1930-Present
____	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

____	Subsistence
____	Settlement
____	Political
____	Demographic
____	Religion
____	Technology
____	Environmental Adaption

IV. Historic Period Themes:

____	Agriculture
____	Architecture, Landscape Architecture, and Community Planning
X	Economic (Commercial and Industrial)
____	Government/Law
____	Military
____	Religion
____	Social/Educational/Cultural
____	Transportation

V. Resource Type:

Category: Structure

Historic Environment: Rural

Historic Function(s) and Use(s): Transportation(road-related), Government(Public Works

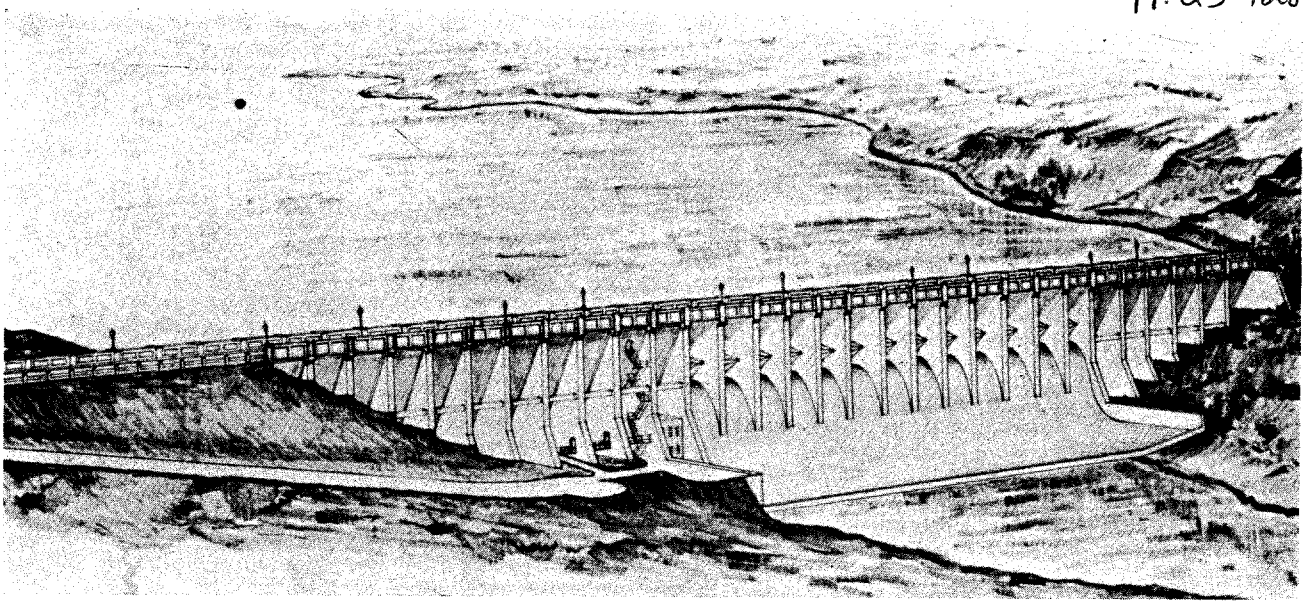
Known Design Source: Ambursen Engineering Corp., Harry R. Hall, WSSC Chief Engineer

M:23-128

The many building operations now under way in the Sanitary District to meet the requirements of the population influx caused by National Defense activities are causing a rapid increase in consumption that exceeds all anticipated demands. Expectations are that more than 4,000 new properties, some of which are large apartment houses, and about 1,000 houses on Federal defense housing projects, as well as the new Federal office building at Suitland, will be connected to the water system this year. It is of the utmost urgency, therefore, that the water supply be increased at the earliest possible date in order that an acute water shortage will not prevail in 1942.

Brighton Dam was part of a long-range program to ensure water supply to the Sanitary District for many years (or until the population reached 200,000) which also included the construction of filter plants, pumping stations, and storage facilites. The dam is a significant to the Washington Metropolitan area in terms of water supply, flood control, hydro-electric power production and recreation. The Dam was recently recognized by the American Water Works Association with a "Water Landmark Award".

M:23-128



Ambursen Dam to Impound Water for National Capital Suburbs

Above—The dam illustrated is being constructed to impound water for consumption by the Maryland suburban area adjacent to the Nation's Capital. It will be 995 feet long, of which 600 feet will be concrete and 395 feet earth embankment. The roadway will be 80 feet above the stream bed. Maximum depth of water behind the dam will be 62 feet. Work started in November and now is estimated about 35 per cent finished. Construction is being carried out on a construction management basis by Ambursen Engineering Corp. Harry R. Hall is chief engineer for the Washington Suburban Sanitary Commission.

FOR the last four months the Washington Suburban Sanitary District has had work under way on an important step for augmenting the water supply of the suburban Maryland skirting the National Capital. The project is a dam being built near Brighton under a $2,500,000 program for utilizing the water of the Patuxent River.

The program, which involves an expenditure of more than $2,500,000, calls for: A dam on the Patuxent River, near Brighton, which is 2.5 miles above Mink Hollow; an intake on the river and a pumping station, with a capacity of 13,000,000 gallons daily, about a mile above Laurel; a force main to a filter plant, with a nominal capacity of 10 million gallons daily, on the Laurel-Burtonsville Road about 3.3 miles west of Laurel, near Willis School; and a filtered water supply line to Branchville to connect with the present distribution system in Prince Georges County.

The dam will be 995 feet long, of which 600 feet will be of concrete construction and 395 feet of earth embankment, with a roadway on top at a height of 80 feet above the stream bed. There will be a maximum depth of water behind the dam of 62 feet. The dam adopted is to be built of reinforced concrete, of flat slab and buttress design, known as the Ambursen type. Several hundred of these dams already have been constructed in this country and abroad. The existing dam on Northwest Branch at Burnt Mills is of the same design. The new dam is being constructed after designs prepared by the Ambursen Engineering Corp., of New York, which will have complete supervision of the work.

Spillway of the dam is so designed as to pass a flood more than five times as great as any known flood occurring on the river in the past. Upon the spillway crest will be installed 13 steel radial gates, each 15 feet high by 18 feet long, which can be raised or lowered to control the water level in the reservoir and to allow the passage of flood waters. Within the dam will be installed a small hydro-electric plant, capable of generating 120 kilowatts, to furnish electric current for operating the gate hoists, heating the gates to prevent ice formation, and for lighting the roadway on the dam and the caretaker's house.

The urgent need for water in 1942 has made it necessary that the work be planned so that the dam will be carried to a high enough elevation by March 15, 1942, to allow for collecting the spring run-off and impounding one billion gallons of water, although the entire structure is not expected to be completed until September, 1942. Special designs have been prepared to accomplish this. The Ambursen type of dam is particularly adaptable to such a requirement.

The reservoir will lie in Montgomery and Howard counties. It will be 5¼ miles long and will have a total capacity of 6.5 billion gallons. It will supply, in the driest season, nearly 25 million gallons of water daily with full allowances being made for silting of the reservoir and evaporation from the water surface. Approximately 775 acres will be flooded. The Commission will acquire approximately 2,000 acres of land for the reservoir and an additional marginal strip around it.

Three highways will be flooded, involving a total length of slightly more than a mile. One of these will be relocated and carried across the dam; another will be raised and provided with a new bridge; and the third, in addition to being provided with a new bridge, will be entirely relocated. Total length of new highways to be built is 3.13 miles.

Since its creation in 1918 the Commission has been gradually developing its water supply sources to meet the steadily increasing demand of the rapidly growing population in the Washington Suburban Sanitary District. At the outset it considered securing the entire water supply from the Potomac River through the Washington system, but was advised that no water could be spared for the Maryland area. It was necessary, therefore, for

M:23-128

the Commission to proceed with the laying out of its own water system without regard to the possibility of securing water from Washington.

At the beginning the Commission was not in a financial position to make a large expenditure for a major water supply development due to heavy demands upon its resources for extensions of water and sewer mains, so it decided to utilize the several existing sources of supply then in use so far as possible, such as those on the old systems of Hyattsville, Takoma Park and Chevy Chase, which had been acquired by the Commission. A new filtration plant of one million gallons daily capacity was constructed at Hyattsville in 1920, taking water from Northwest Branch.

As the demand for water increased a filter plant was constructed in 1924 on Northwest Branch at Burnt Mills, in Montgomery County, and increased in size in 1926 to provide a daily capacity of 4,000,000 gallons. In 1930 a small dam was constructed at Burnt Mills which impounded about 50,000,000 gallons of water, and finally in 1934 and 1936 the present permanent Burnt Mills filter plant was completed and placed in operation, providing a nominal daily output of 10 million gallons. Thereafter all other sources of supply were abandoned.

Several connections were made to the Washington water system to insure a dependable reserve supply in case of extremely hot weather, severe droughts, conflagrations or failures in any parts of the Sanitary District system.

In 1939 a pumping station was constructed on the Patuxent River at Mink Hollow, near Ashton, and a pipe line was extended across the divide to Northwest Branch through which 8,000,000 gallons daily can be pumped to supply the additional water necessary to augment the flow in Northwest Branch in dry periods. The pipe line has a capacity of twice this amount and the pumping station can be increased accordingly. It was believed that the combination of Northwest Branch, the Patuxent River and the connections to the Washington system would be adequate until 1942.

The many building operations now under way in the Sanitary District to meet the requirements of the population influx caused by National Defense activities are causing a rapid increase in consumption that exceeds all anticipated demands. Expectations are that more than 4,000 new properties, some of which are large apartment houses, and about 1,000 houses on Federal defense housing projects, as well as the new Federal office building at Suitland, will be connected to the water system this year. It is of the utmost urgency, therefore, that the water supply be increased at the earliest possible date in order that an acute water shortage will not prevail in 1942.

The average daily water consumption in the past 23 years has increased from less than 500,000 gallons to over 8,000,000 gallons and the population served from less than 10,000 to approximately 120,000 at the present time. The recent dry spell, extending through September, October and November, compelled the Commission to draw heavily upon the Washington water system to the extent of about two-thirds of its daily consumption. It is certain that the same amount of water will not be available from Washington in 1942 as the demands on that system are likewise rapidly increasing.

Studies have been conducted over an extended period on a long-range program of water supply development to serve the needs of the Sanitary District for many years in the future. The Potomac and Patuxent rivers, the Northwest Branch of the Anacostia River, Paint Branch and Seneca Creek were all investigated and in many instances surveys of dam sites actually were made.

Results of these studies led to the conclusion that development of Northwest Branch, which already has been carried out, followed by utilization of the Patuxent Rivers would provide the most economical and satisfactory plan for water supply and one which could be carried out without excessive expenditures at any one time. The main Patuxent River itself can be developed by impounding to supply 50,000,000 gallons of water daily which will provide a water supply sufficient for approximately 500,000 people.

Construction of the pumping station at Mink Hollow and the pipe line to Northwest Branch is preliminary to the second step in the utilization of the Patuxent River. It will make available a larger amount of water during the dry seasons and will practically double the capacity of the water supply sources. This second step is the project on which the Commission is now engaged.

In addition to the work on the dam, contracts already have been awarded for construction of the structures of the filter plant near Willis School and the roadway to the Laurel pumping station. Plans are nearing completion for the pumping station itself and the filtered water supply line to Prince Georges County. When this program is completed the existing filter plant at Burnt Mills will continue to furnish water from Northwest Branch to Montgomery County, any deficiency in the flow of Northwest Branch during dry weather to be made up by water pumped from the Patuxent River at Mink Hollow. The dam will store the Patuxent River water so as to regulate the stream flow in order that an ample amount will be permitted to continue downstream at all times to supply the Mink Hollow and Laurel pumping stations. The latter will furnish all the water required by Prince Georges County through the Willis School filter plant. Thus there will be two separate filter plants supplying water to the Sanitary District, one for Montgomery and one for Prince Georges County, with a dependable supply of water available amounting to over 20 million gallons daily, more than twice the present average daily consumption.

The present project is part of a long-range program calling for progressive water supply development over a considerable period in the future to which additions can be made from time to time as the requirements of the Sanitary District demand. It is expected that this plan will serve the area until the population reaches over 200,000, with such additions to the filter plants, pumping stations, main feeders and storage facilities on the system as will be required from time to time to provide for growing peak demands on the system along with the increased consumption.

The next step to secure additional water contemplates construction of a second dam just above the Laurel pumping station which will further impound the flow of the river so that a further amount of at least 25,000,000 gallons per day can be secured. The pumping station at the Laurel intake can be increased in size as required and the filter plant can be enlarged to a daily capacity of 40,000,000 gallons. A pumping station is contemplated for the future at the Willis School filter plant which would pump water to Montgomery County through a pipe line extending across country to Burnt Mills.

The Middle and Little Patuxent rivers and Seneca Creek present the next possibilities as sources of supply. In combination with the Patuxent River they can be depended upon to supply about 150 million gallons of water daily which would serve a population of about 1,500,000 people.

Reprinted from

CONSTRUCTION

March 2, 1942 issue

Published by MANUFACTURERS RECORD, Baltimore, Maryland

1. Description: Brighton Dam, located approximately 13 river miles upstream of Laurel, Maryland, forms Triadelphia Reservoir. The dam is 62.4 feet high, 995 feet long, and includes three types of sections.

Buttress supported concrete slabs on both the upstream and downstream faces form the central 13-bay gated spillway portion of the dam. Taintor gates are structural steel, radial type, 18 feet wide by 15 feet high and topped by 17-inch flashboards. Gates are supported on the ogee shaped crest in the closed position.

Four movable gate hoists are used to regulate the gate openings. Two independent power sources are provided. The original design contemplated normal use of electrically driven motors to operate the hoists, with emergency power provided by gasoline engines mounted on each hoist. The present operating practice is to utilize the gasoline engines as the primary power source, with the electric power supply reserved for emergency use.

The spillway section is flanked by buttress supported concrete bulkheads joined to the natural valley walls by earth embankment sections. Maryland Route 216 is located on the dam with a 600' x 33' bridge crossing the gated spillway and bulkhead sections.

The dam outlet works consist of five silt valves and two needle valves. Total rated discharge capacity is approximately 1000 c.f.s.

The 78.4 square mile tributary area includes two major basins, the Upper Patuxent (draining 35 square miles), and Cattail Creek (draining 28 square miles). The remainder of the watershed drains directly into Triadelphia Reservoir.

The watershed is predominantly rural and agricultural. However, urbanization is increasing along the fringes of the watershed. The area directly surrounding the reservoir is owned by the Commission and is under strict conservation management to prevent unnecessary silt loads on the reservoir. Soils of the tributary area are generally moderately deep to deep, well-drained, micaceous upland soils. Glenelg, Manor, and Chester soils are dominant. The watershed is situated in the Piedmont Plateau, where streams

are relatively swift and clear. Undeveloped areas are characterized by rolling farmland and deciduous forests.

2. History: Brighton Dam was completed in 1943 for the purpose of creating a single purpose water supply pool. For the first 28 years of the structure's existence, reservoir operation was predicated solely upon water supply consideration, with only incidental benefits of recreation and flood control. Subsequent to the floods of August and September, 1971, the Commission lowered the operating water surface elevation two feet in order to provide a degree of flood protection for downstream interests. In June, 1972, the basin was subjected to the most severe flooding in its history as a result of Tropical Storm Agnes and attendant thunderstorms. As a result of this flooding, the Commission lowered the operating water surface elevation one additional foot. The Commission, in conjunction with the National Weather Service and USGS, also instituted a flood forecasting system to assist in the operation of the reservoirs during flood conditions.

2.1 Additions to Facilities: Brighton Dam was originally equipped with two gate operating hoists. Subsequent to the flooding of June, 1972, the Commission added two hoists, bringing the total number of hoists in use to four.

A reservoir level gauge has been installed to transmit a continuous pool elevation to the Commission's Control Center, located in its Hyattsville office.

2.2 Previous Reports: A 1972 report by Gannett Fleming Corddry and Carpenter, Inc., prepared for the Commission, presented a review of the Commission's operating procedures and an investigation into the feasibility of applying modified reservoir operation in the interest of flood control. This report indicated that the reservoirs could provide flood protection for no more than a 20-year flood without excessive sacrifice of water supply storage.

3. Hydrology:

3.1 Unit Hydrographs: The composite unit hydrograph for Triadelphia Reservoir is composed of three subbasin unit hydrographs. One unit hydrograph was

THE WASHINGTON TIMES The National Daily WEDNESDAY, AUGUST 6, 1930

WATER IN HYATTSVILLE RESERVOIR LOWEST IN ITS HISTORY

VIEWS OF RESERVOIR SHOWING EFFECT OF DROUGHT

TWO AND ONE-HALF million gallons of water once passed through the filtering plant daily at the reservoir on the Colesville pike, which furnishes Hyattsville and other suburbs with water. Now, as a result of the prolonged drought, only 750,000 gallons of water are passing through the pipe lines daily. Engineer George Day, employed at the waterworks for the past 30 years, declares the water, now 14 feet below normal, is the lowest he has ever seen it. The water shed, two and one-half miles long, is now but a narrow creek, as shown by the picture. So low has the water fallen, it has been necessary to tap the base of the dam to get sufficient water. Now only a three-inch deep stream of water passes through the pipe, whereas a short time ago the water was flowing three feet over the top of the dam.

FIRE SCARE OFF PYROTECHNICS

BALTIMORE, Aug. 6.—A pyrotechnic display, rivaling those that featured Baltimore's Fourth of July celebrations, destroyed $10,000 worth of fi National Fireworks Eastern Avenue ap last night, brought automobile traffic a shed owned by Loss to the buildin at $3,000.

During the displ 8:30 and lasting fo half hour, the vicin by red, blue and gr the air shattered plosions.

The blaze was f by several youths v pouring from a ve hed.

In addition to

Paris Styles Go Back 40 Years to '90 Modes

PARIS, Aug. 6 (I.N.S.).—Fashions for women reverted with a 40-year backward jump, to the styles of the "gay nineties" as the eagerly-awaited creations of the famous couturiers of Paris were displayed to hundreds of

Scores of novelty creations by the well-known designers attracted the attention of spectators as the various fashion shows opened. Paiou burst upon the horizon with a startling "peek-a-boo" cocktail frock, one of the most sensational creations shown

DROUGHT HURTS MONTGOMERY

ROCKVILLE, Md., Aug. 6.—Montgomery county expects a corn crop less than one-half that of last season unless the drought

Hoover Camp Wins Fame as Sanctuary For Newlyweds

RICHMOND, Va., Aug. 6.—Instead of a summer White House, President Hoover's lodge in the Virginia mountains is becoming known as "honeymoon retreat."

On each of their last three

FIDACS GATHER HERE SEPT. 18

Fidac, the international organization of former service men banded together in the cause of world peace, will open its eleventh

IN PIPE

ET KILLER

THE BIG DROUGHT

Because most of its principal services always have been water-oriented, much of the Commission's history has been flavored by drought conditions which frequently visit the suburban Maryland area. Although a severe drought put exceptional stresses on the Commission's water sources during 1966, a long-lasting dry spell during the late 1920s and the 1930s is the one many old timers have remembered as the "granddaddy of 'em all." When water tables dropped and private wells dried up, thirsty homeowners clamored for public water service from the WSSC. It was a difficult period, which taught the WSSC and its customers that the time had come to plan ahead and look to more productive, more distant sources of water to meet the needs of the growing bi-county community. "The Drought" served as an important spur to the ultimate development of the WSSC's two-river water supply system.

M-23-128

chairman of Suburban Trust Company's board, became one of Maryland's largest "home-grown" financial institutions. He had served as chairman of the WSSC for 17 years, so it would be an understatement to say that the news of his departure was seen as the end of an era. Several prominent politicians expressed the view that the loss of his strong leadership might eventually spell the end of the WSSC. One newspaper editorialized: "The opinion held by some officials that the Sanitary Commission will be able to survive without Mr. Duckett watching over the operation is unrealistic!"

Concerns about the WSSC's future no doubt soon evaporated in most quarters; because, although he had relinquished his post as a WSSC policy leader, he returned to the agency a month later as General Counsel, a position he later also held at the Maryland-National Capital Park and Planning Commission.

Also in the late thirties, two men who were some years later to become Chief Engineers of the WSSC made significant moves. Harry B. Shaw, an engineering graduate of Johns Hopkins University who had come to the WSSC as a rodman participating in the early surveys conducted by the agency, was elevated to the post of deputy chief engineer. Robert J. McLeod joined the agency's staff shortly after his 1938 graduation as a civil engineer from the University of Maryland.

Mr. Hall's leadership and the WSSC's growing reputation as a uniquely organized, semi-regional agency helped attract many young and talented professionals to the agency's staff. Mr. McLeod was one of number of young engineers and other professionals who started work at the busy, fast-growing WSSC in the late 1930s, only to march away for military service during World War II. Many of them returned to the WSSC at war's end and stayed to become part of the next wave of staff leaders for the agency during the late 1950s, 1960s and into the 1970s.

Certainly to Harry Hall's credit, he directed the planning and implementation of new programs and projects with almost miraculous success in the period when money was short, the available work force was drastically reduced by departures for military service, materials essential to operations and systems development were scarce and tightly controlled by federal authorities, and neither new equipment nor parts to keep old equipment in operating condition were readily available because of the war effort.

WATER

A severe drought had gripped the region with hardly a break from 1930 through 1936, highlighting the need for a new source of water to serve the Commission's thirsty customers. The the lake area behind the small dam on the Northwest Branch (of the Anacostia River), from which the Commission drew its water for processing at the Robert B. Morse Filter Plant near Burnt Mills, Silver Spring, received such heavy sedimentation from agricultural lands upstream that its holding capacity was reduced by 40 percent in less than a decade from its completion in 1930 through mid-1939. Experts generally agreed that erosive run-off from privately-owned land in the watershed would come close to devouring most of the remaining capacity in another decade.

This finding caused WSSC Deputy Chief Engineer Shaw to point out to a **Washington Times** reporter that this small dam and the Northwest Branch stream "were never meant to take care of ultimate water needs" for the Commission's service area. Drought conditions served as spur to the agency's search for a more plentiful and reliable flow of water which could somehow be diverted and delivered to the Morse Plant.

The Patuxent River, which originates in upper Montgomery County in the vicinity of Damascus and follows a southwesterly course along the common boundary of Montgomery and Howard Counties, was selected. In mid-1939, the Commission marketed a $600,000 bond issue -- recently authorized to raise money for major water supply improvements -- for a 50-year term at an interest rate of 2.604 percent. $200,000 of that amount was earmarked to pay for the construction of a pumping station at Mink Hollow, adjacent to the Patuxent a mile or so east of the little community of Ashton, and the construction of a cross-country pipeline almost two miles long that would transport raw water from the new station over an intervening ridge to the headwaters of Northwest Branch.

The scheme was designed to augment the natural flow of Northwest Branch by sending a bolstering slug of Patuxent water (up to 8 million gallons a day) to the Morse Plant at Burnt Mills whenever a supplement was needed to maintain an adequate rate of filtered water production to meet customer

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Participants in this 1941 WSSC bond settlement included, right side of table from front to back, Secretary-Treasurer J. Darby Bowman and Commissioners Frank Smith and J. Donald Clagett; the left side of the table at far end, Joseph Doyle of the Equitable Trust Co., Baltimore, and next to him Evelyn L. Sweet of the Secretary-Treasurer's Office.

demands. The project was rushed into service in the fall of 1939; but, within a few months, Mr. Hall announced that the Commission was contemplating the construction of a Patuxent River Dam and would be surveying the stream valley for prospective sites.

In the 1970s or 1980s, it might take a decade or more just to pass through the studies, environmental assessments, hearings and other exercises required to arrive at the final selection of a site for a water supply dam; but, obviously, project planning and implementation processes worked faster in the 1940s. By early 1941, legislation authorizing a $2 million water bond issue to finance the development of a dam and reservoir plus the construction of a new filter plant near Laurel -- ostensibly to provide increased supply for Prince George's County so that the Morse Plant's production could be dedicated to the growing needs of Montgomery County -- was passed by the Maryland Legislature exactly as requested by the Commission.

The measure encountered a temporary hitch when Montgomery County Democratic chieftain E. Brooke Lee, serving in the Maryland House of Delegates at the time, offered an alternative bill that would have directed Montgomery and Prince George's Counties to enter into a cooperative study with Virginia and the District of Columbia to look at the Potomac River as "a permanent water supply"

The "Mink Hollow" raw water pipeline stretched two miles across country from the Patuxent River to Northwest Branch.

for the region. According to newspaper accounts, Col. Lee thought a "Potomac Plan would be preferable to a Patuxent Plan." His proposal was not accepted in 1940; but the clarity of his vision for the Potomac as the principal drinking water source for suburban Maryland and its neighors in the Washington Metropolitan Area was confirmed by regional studies initiated by the WSSC and other agencies in the 1950s. These studies were followed by a series of Potomac River water supply development projects completed during the late 1950s through the 1980s

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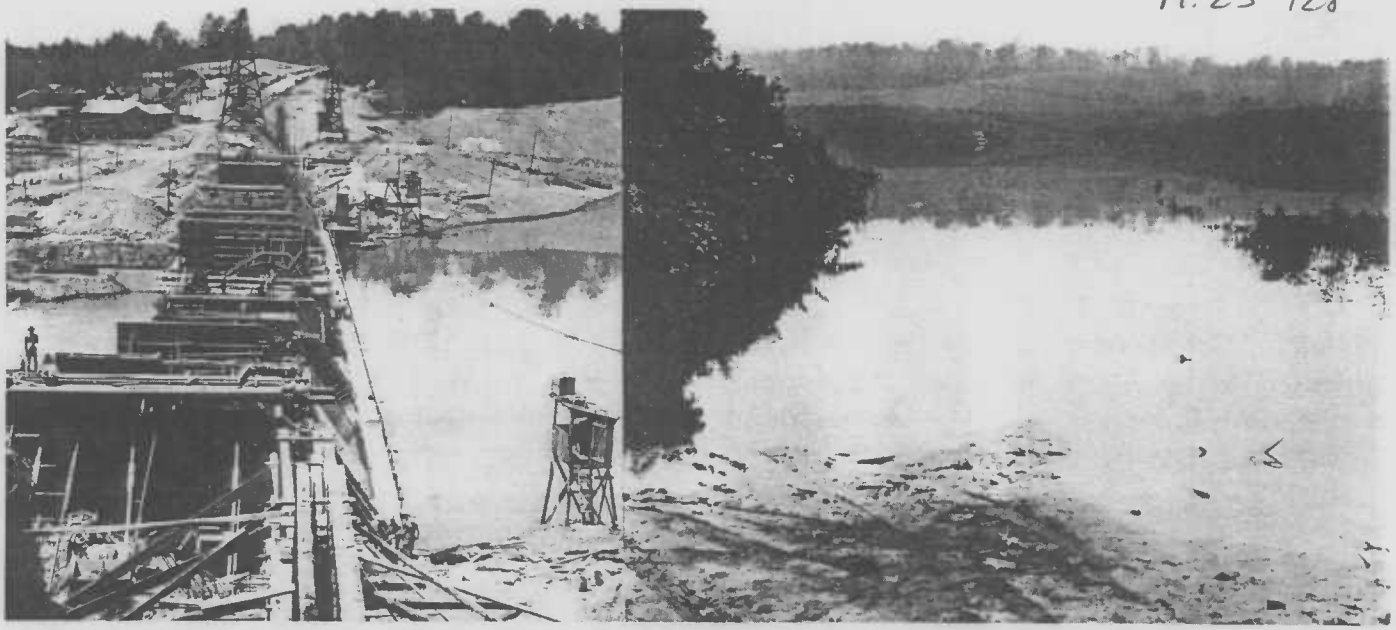


Construction of Brighton Dam in the 1940s was a difficult task because of World War II's shortages of workers, fuel and materials. The right photo shows a portion of the reservoir's "pond" area before it filled. Trees were cleared from much of the lake bed, and some of the "bushwacking" was performed by German prisoners of war.

by the U. S. Army Corps of Engineers, the WSSC, the City of Rockville and the Fairfax County Water Authority to serve customers in the entire Metropolitan Washington Area.

In March 1941, the Commission applied to the State Water Resources Commission for permits to develop the Patuxent supply with a dam near Brighton, several miles north of Ashton, plus a filter plant on the "Willis School" site a mile west of Laurel and a pipeline, nine and a half miles long, to carry filtered water from the new Patuxent River Plant to the heart of the Prince George's County distribution system at Branchville.

"The Capital area is experiencing a building boom," Mr. Hall stated in support of the program. "The necessity for getting this work under way as quickly as possible is becoming more apparent each day. Whatever time can be saved now will go a long way toward preventing the possibility of requiring restrictions on the use of water during 1942." He predicted that the project could be under construction by the summer of '41 and expressed hope that the work would advance fast enough to allow the project to boost water supplies the following summer. Mother Nature served up another drought in 1941 and allowed it to continue through 1942, 1943 and into early August 1944, when the **Washington Post** reported arrival of "the heaviest rain in two years...a tropical storm which dumped 6.1 inches of rain on the area in one day."

In spite of the fact that war was declared by the United States in December 1941, bringing with it severe curtailment of non-defense construction activities, contract work on the WSSC dam did make steady progress. Even after the dam had reached a height when it could start causing impoundment of the 800-acre area to be known as Triadelphia Lake, the dry weather reduced the Patuxent's lake filling flow to a trickle. April 1942 was described by the **Washington Star** as the "driest April in 95 years." July 1943 was called the "driest since 1929" and an agricultural extension agent reported that "Montgomery County's 1,000 victory gardens face heavy drought loss...a 50 percent crop loss."

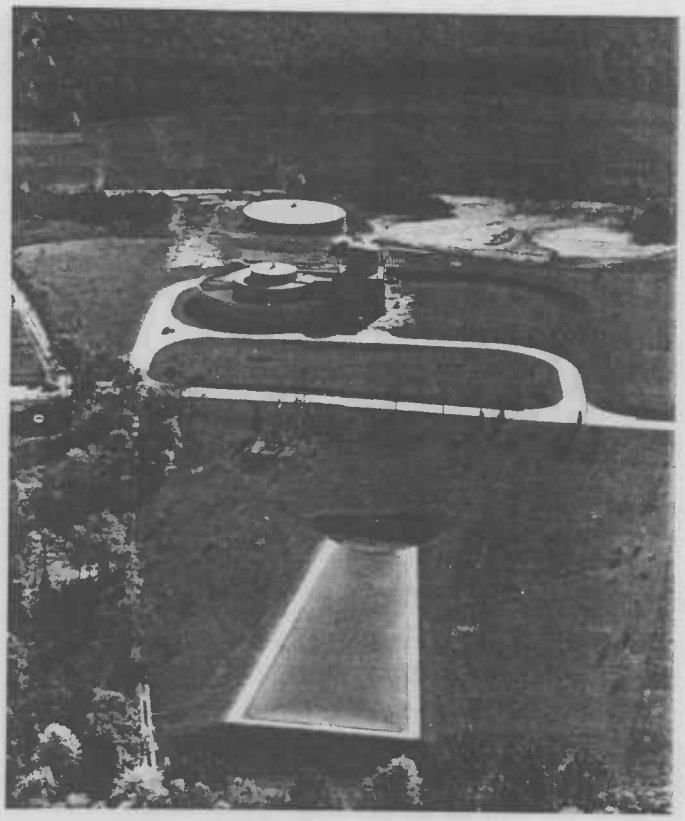
Finally, Brighton Dam -- 1,000 feet long, designed to create a reservoir with depths up to 63 feet and stretch five and a half miles upstream -- was officially dedicated on Memorial Day 1944 (several months before the August deluge). In July of the same year, the new Patuxent River Filtration Plant went into service and started feeding water through the also new supply pipeline to Prince George's County.

Some clearing and grubbing work on the WSSC's reservoir property at Brighton was delayed by an unusual and brief outbreak of labor strife in late December 1944. 50 German prisoners of war, who were held at a camp near Frederick, Md., reported daily as a work detail to help with clearing operations at the new lake. They staged a "sit-

down'' at their camp on December 26, stating that they refused to work on a holiday. According to a newspaper story, the prisoners claimed December 26 -- the day after Christmas -- was always a day off in Germany. The short-term work stoppage was taken in stride by the WSSC, which told a **Washington Star** reporter the Germans had been providing ''excellent service.''

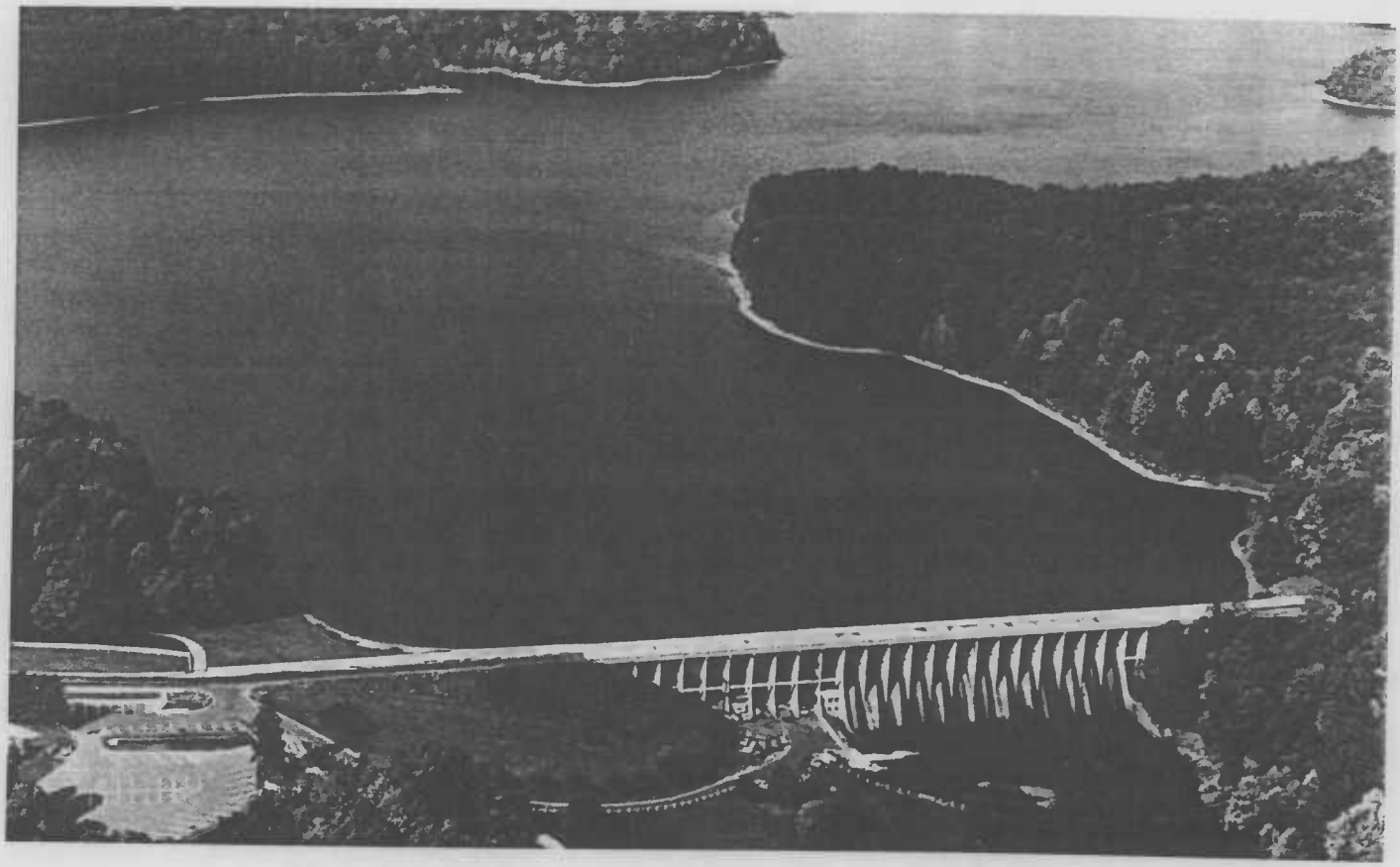
Like the Commission's other plant at Burnt Mills, the Patuxent Plant featured the unique design developed by the WSSC's first Chief Engineer Robert Morse -- a circular configuration with an outer ring serving as a settling tank where chemicals (alum or ferric chloride) are added to promote coagulation and removal of mud from the raw water and rapid sand filters positioned around an inner circle like pie slices, all pointed toward a clear (filtered) water observation well and the filter control panel in the center. The settling ring was uncovered, while the filter units, clear well and controls were enclosed to facilitate all-weather operation.

The Patuxent Plant's production capacity in this first stage was rated at 12 million gallons a day.



At its first-stage completion in 1944, the Patuxent Plant was less than one-fourth its ultimate size.

When completed, Brighton Dam provided the WSSC with its first major water supply impoundment. Over the years, more than 6,000 acres were acquired by the WSSC to provide a protective perimeter of open space for this lake and its downstream partner, the T. Howard Duckett Reservoir.



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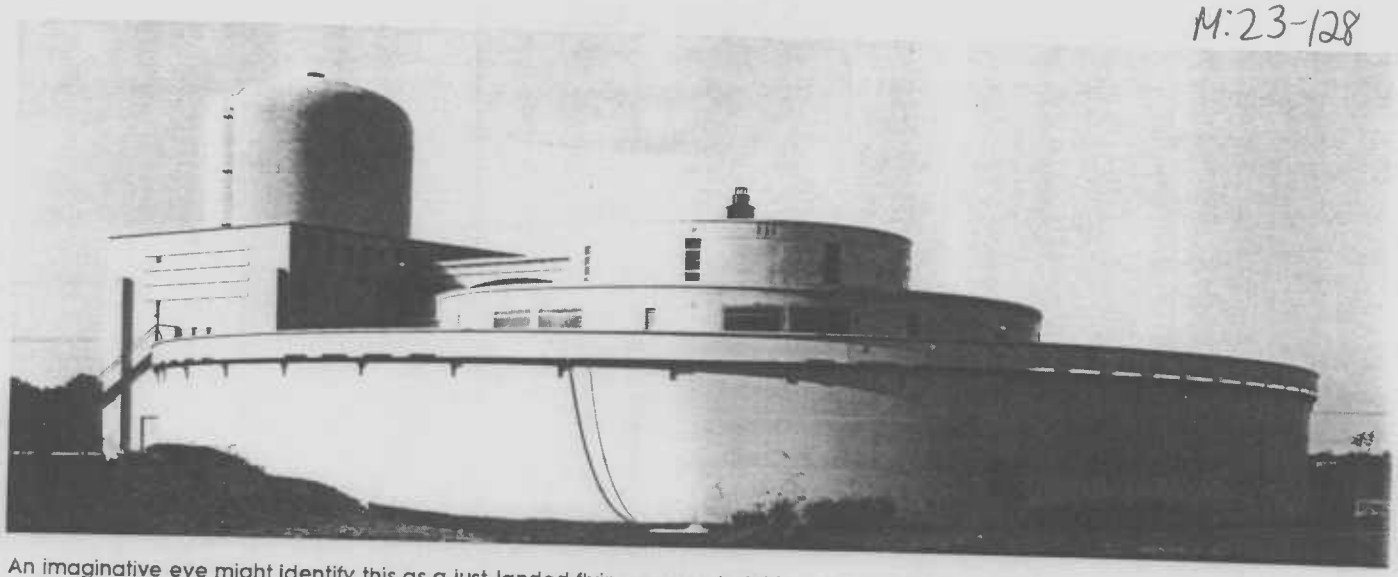

An imaginative eye might identify this as a just-landed flying saucer, but this "object" actually was the first stage of the Patuxent Water Filtration Plant standing alone at its spacious site on the former Willis School Property adjacent to State Route 198, a mile or so west of Laurel.

Added to about 10 million gallons of daily capacity at the Burnt Mills facility, WSSC water capacity had more than doubled; but continuing growth of the area kept engineers at the drawing board. Before the end of World War II, plans for expansion of the Patuxent Plant to make it the WSSC's principal supply facility for both Montgomery and Prince George's Counties during the 1950s and into the early 1960s were already under way.

SEWER

While the WSSC was making substantial progress with the expansion of its water supply capabilities, the elimination of stream pollution problems related to inadequate sewage collection and disposal facilities were not so susceptible to rapid or orderly solution.

Up until the late 1930s, most of the work in the suburban Maryland area had involved the construction of pipelines to carry sewage away from developed areas, where public health hazards and odor problems were the subjects of great concern, to less congested points of discharge downstream. Under the 1925 agreement with the District of Columbia, the WSSC had connected several hundred houses in the Rock Creek and Little Falls Basins to the city's system; but there were still open discharges of raw sewage (as well as run-off from private septic systems) at a number of points along these streams, and the large Anacostia River Basin, which spanned much of west-central Prince George's County and southeastern Montgomery County had a growing sewer network but no central treatment facility.

In the late summer of 1938, **The Washington Times Herald** called for "immediate river clean-up" in Washington and its suburbs, specifically citing "millions of gallons of refuse which daily pour into the District from Maryland." The newspaper suggested that officials better get together quickly to accomplish a tie-in of the suburban systems with new facilities being planned by the District at Blue Plains.

"(D.C.) Commissioners are guilty of shameful neglect," the newspaper charged. "Within a month actual work can be started to restore the Potomac and Anacostia Rivers to their natural purity and people can swim, fish and play (in the Potomac River) from Great Falls to Blue Plains without fear of typhoid fever and dysentery." The editorial added: "This is no guess, nor is it a dream," pointing out that an act of Congress in 1916 had "authorized the District of Columbia to dispose of suburban refuse (sewage)" but "Chairman Hazen (of the DC Board

Suburbanites Plan Own Sewage Plant

SUBURBAN GROUP TALKS WITH ICKES ON SEWAGE PLANT

D. C. W Sewer I For Ma

To [illegible] $700,000 Blad Deal Coll:

District Denies Suburbs Use Of Sewage Disposal Plant

Post Star Sept 30, 38

Suggests Sanitary Commission Build System

Recalls Rejection of Previous Offer

Needed to Reduce Pollution of Anacostia Ri

Sanitary State M Pollutio

Members Suburban voted to treatment a cost of yesterday. Work on public wor fore Janua Follow-in, with Distr visability

Commissioner Hazen bluntly told officials of the Washington Suburban Sanitary Commission yesterday he preferred they build their own sewage disposal plant in Prince

HOPE OF P. W. A.

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ENVIRONMENTAL EDUCATION INFORMATION SHEET

DAM FACTS

BRIGHTON DAM CREATING THE TRIADELPHIA RESERVOIR

Type of dam.....Slab and buttress with taintor gates

Height of 13 concrete spillways.....50 feet

Spillway length.....234 feet

Size of 13 taintor gates.....15 feet high and 18 feet wide

Height to top of taintor gates.....65 feet

Height of dam at road surface.....80 feet

Elevation at top of taintor gates.....365 feet above sea level

Crest of dam elevation above sea level.....366.45 feet

Height of crest above stream bed.....66.45 feet

Length of dam.....995 feet

Reservoir depth.....Max. 65 feet, Average 30 feet

Length of reservoir.....5½ miles

Length of shoreline.....11½ miles

Construction period.....1941 - 1943

Contractor.....Ambursen Engineering Corp.

Cost.....$2.3 million in early 1940's dollars

Intake tower can withdraw water from three levels: 310 foot elevation
323 foot elevation
350 foot elevation

WSSC owned perimeter property.....1,930 acres

Minimum flow-by required.....1.14 mgd or 7.5 cfs

Storage capacity of reservoir.....7 billion gallons

24" needle valves (elevation 305') at reservoir elevation 365': 2 valves each at 130 cfs

Nos.4&5 24" silt valves (elevation 314') at reservoir elevation 365':2 valves each at 175 cfs

Nos.1,2,3 24" silt valves (elevation 305') at reservoir elevation 365':3 valves each at 135 cfs

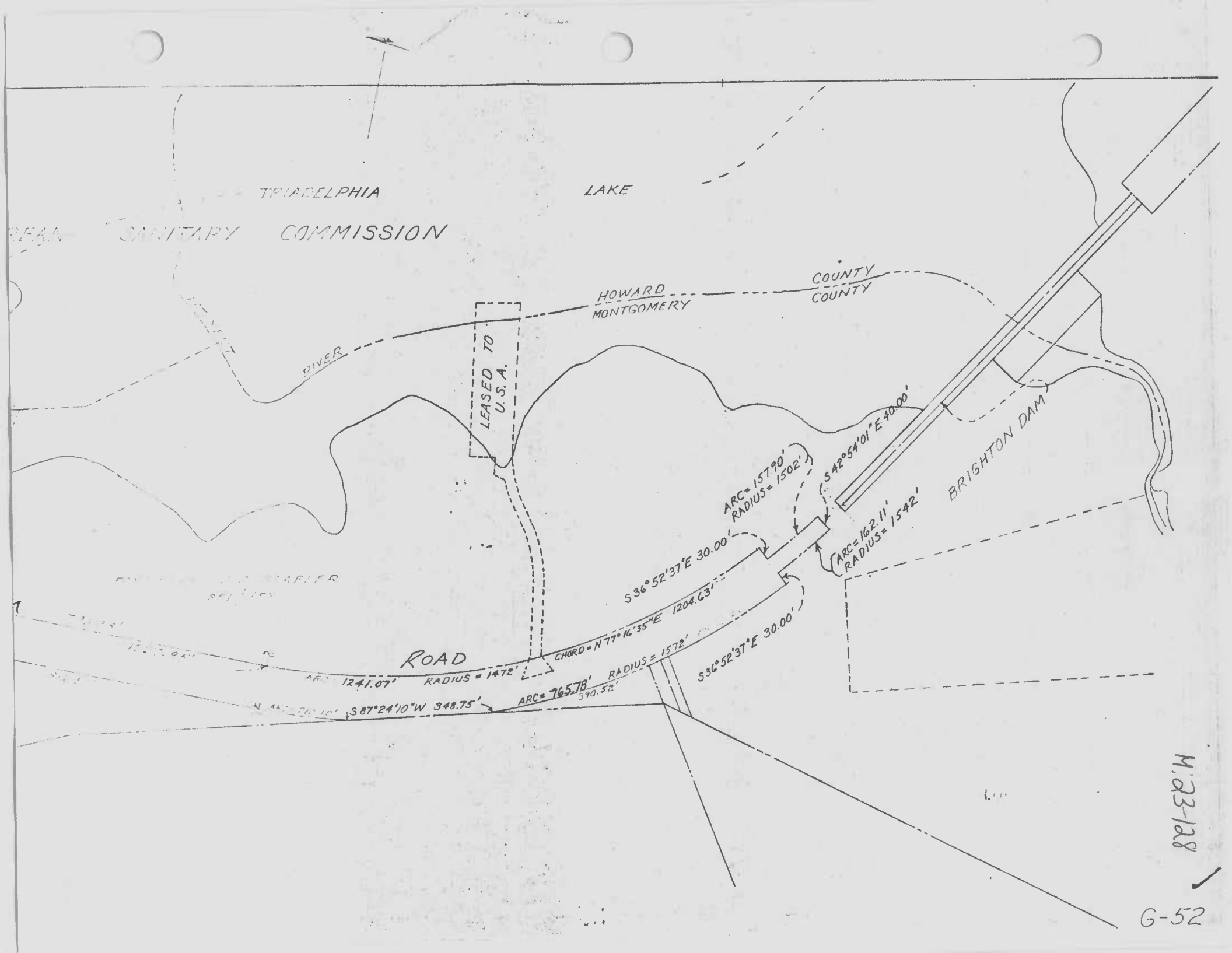
Brighton Dam Discharge Capacity:

Maximum discharge over 13 spillways at elevation 368' = 66,000 cubic feet per second (cfs)

at elevation 365' = 48,360 cfs

Prepared by: Michael Grear

ssa (Revised 1/92)


TRIADELPHIA
LAKE
SANITARY COMMISSION
HOWARD COUNTY
MONTGOMERY COUNTY
RIVER
LEASED TO U.S.A.
BRIGHTON DAM
ROAD
ARC = 157.90'
RADIUS = 1502'
S 42° 54' 01" E 40.00'
ARC = 162.11'
RADIUS = 1542'
S 36° 52' 37" E 30.00'
CHORD = N 77° 16' 35" E 1204.63'
ARC = 1241.07'
RADIUS = 1472'
S 36° 52' 37" E 30.00'
ARC = 765.78'
RADIUS = 1572'
390.52'
S 87° 24' 10" W 348.75'
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G-52

J5

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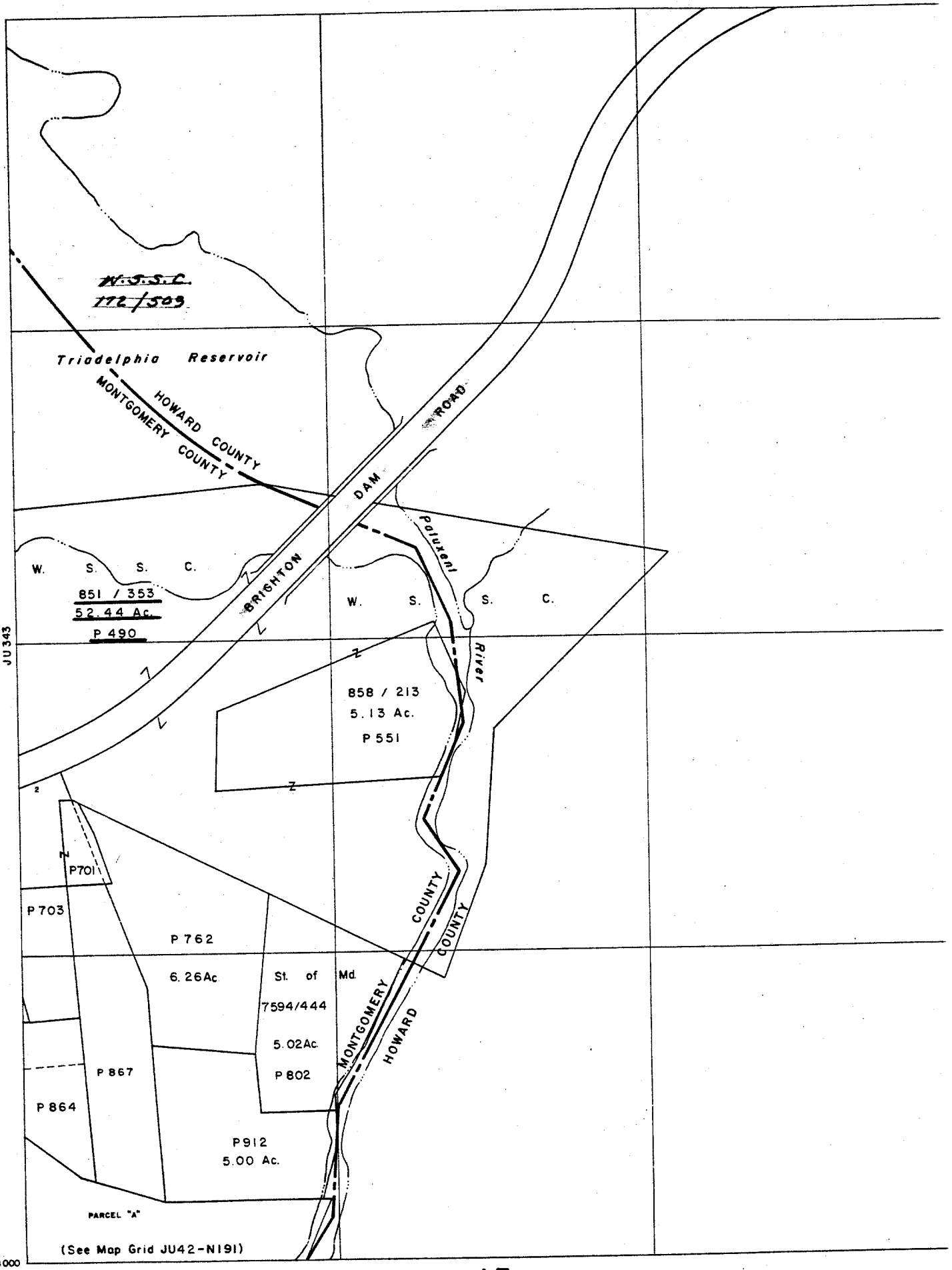
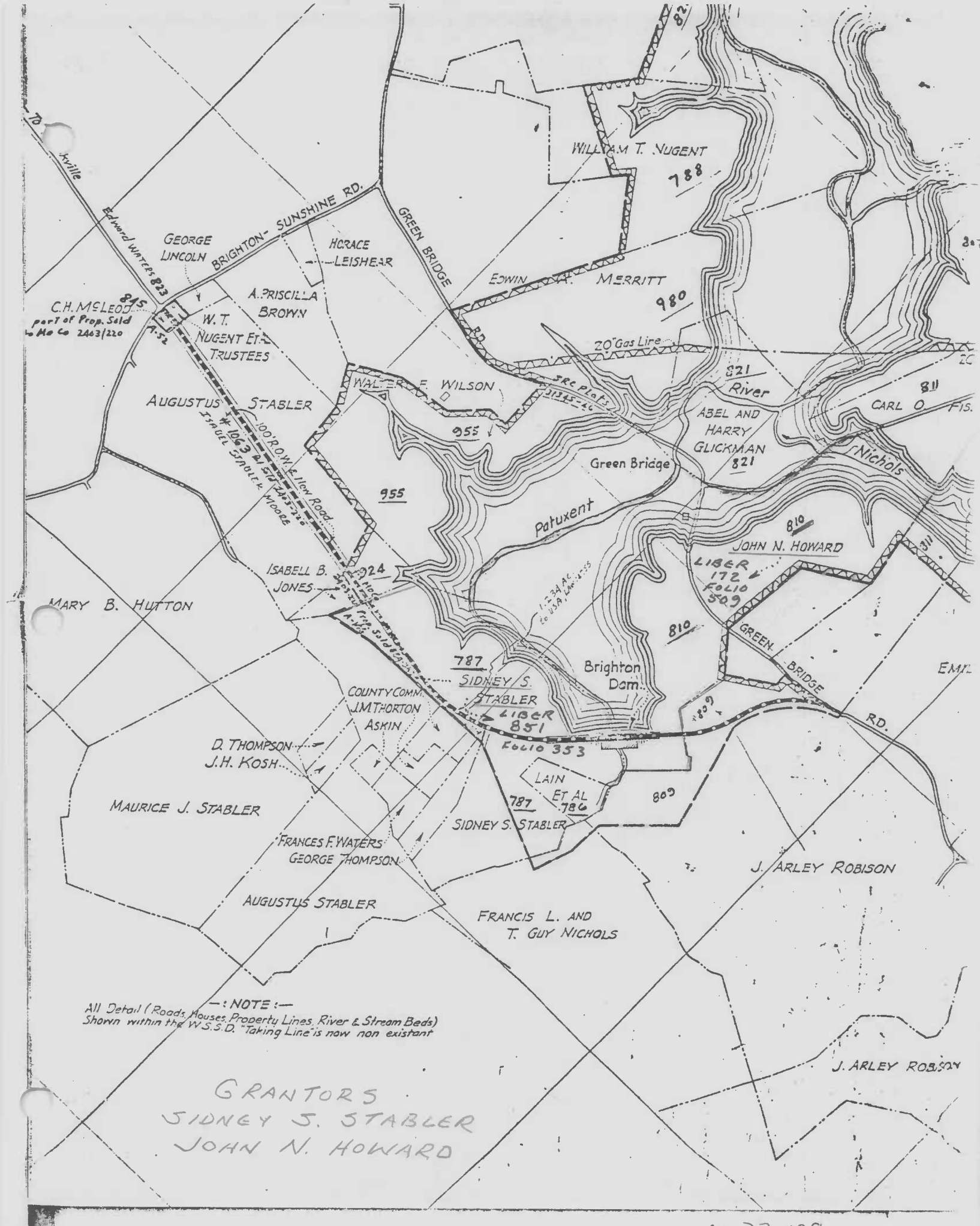
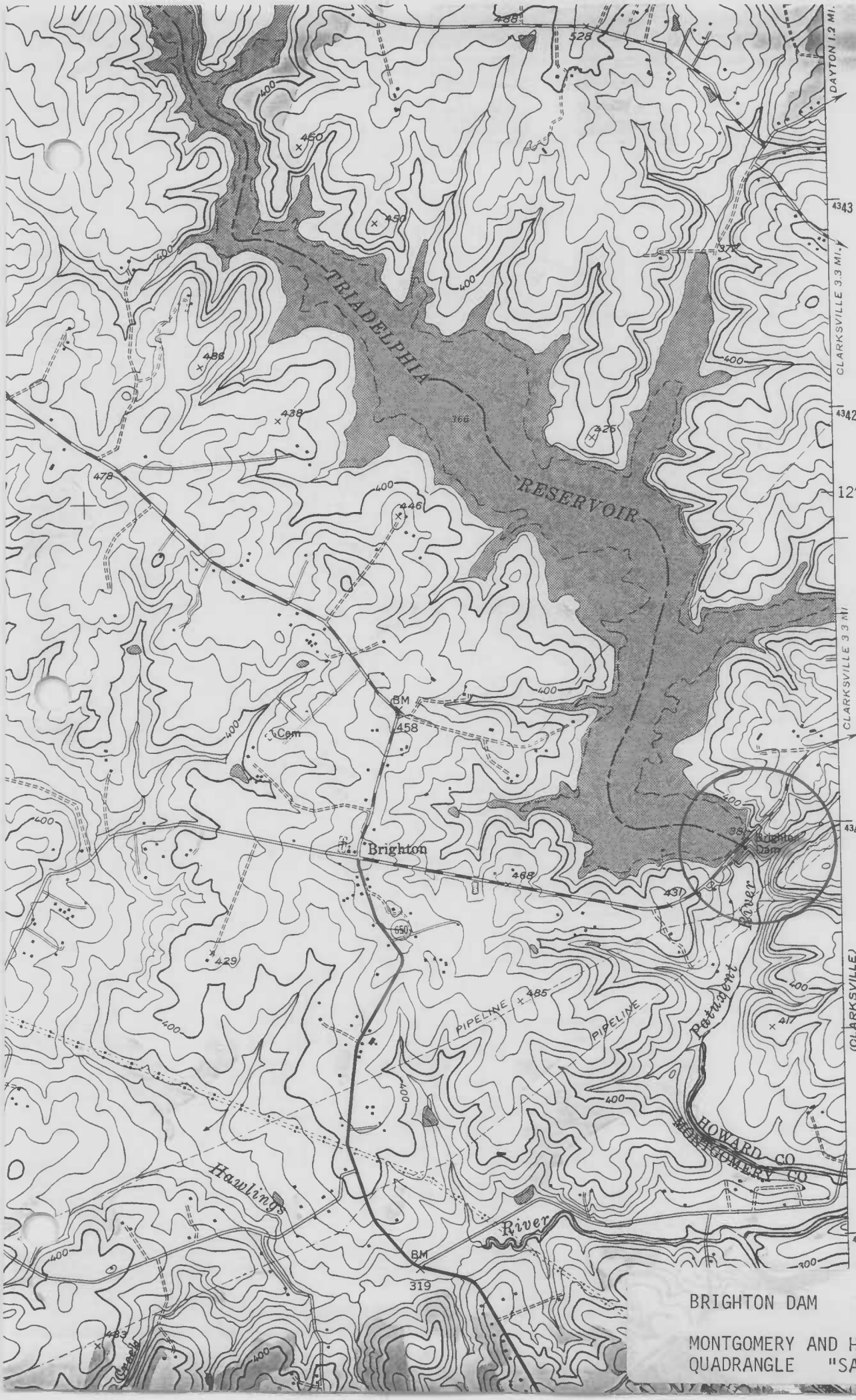

W.S.S.C.
172/509
Triadelphia Reservoir
HOWARD COUNTY
MONTGOMERY COUNTY
DAM
ROAD
BRIGHTON
Patuxent
River
W. S. S. C.
851 / 353
52.44 Ac.
P 490
W. S. S. C.
858 / 213
5.13 Ac.
P 551
P701
P 703
P 762
6.26Ac
St. of Md.
7594/444
5.02Ac.
P 802
P 867
P 864
P912
5.00 Ac.
PARCEL "A"
COUNTY
COUNTY
MONTGOMERY
HOWARD
(See Map Grid JU42-N191)
U3
JU 343
N 108 000
000

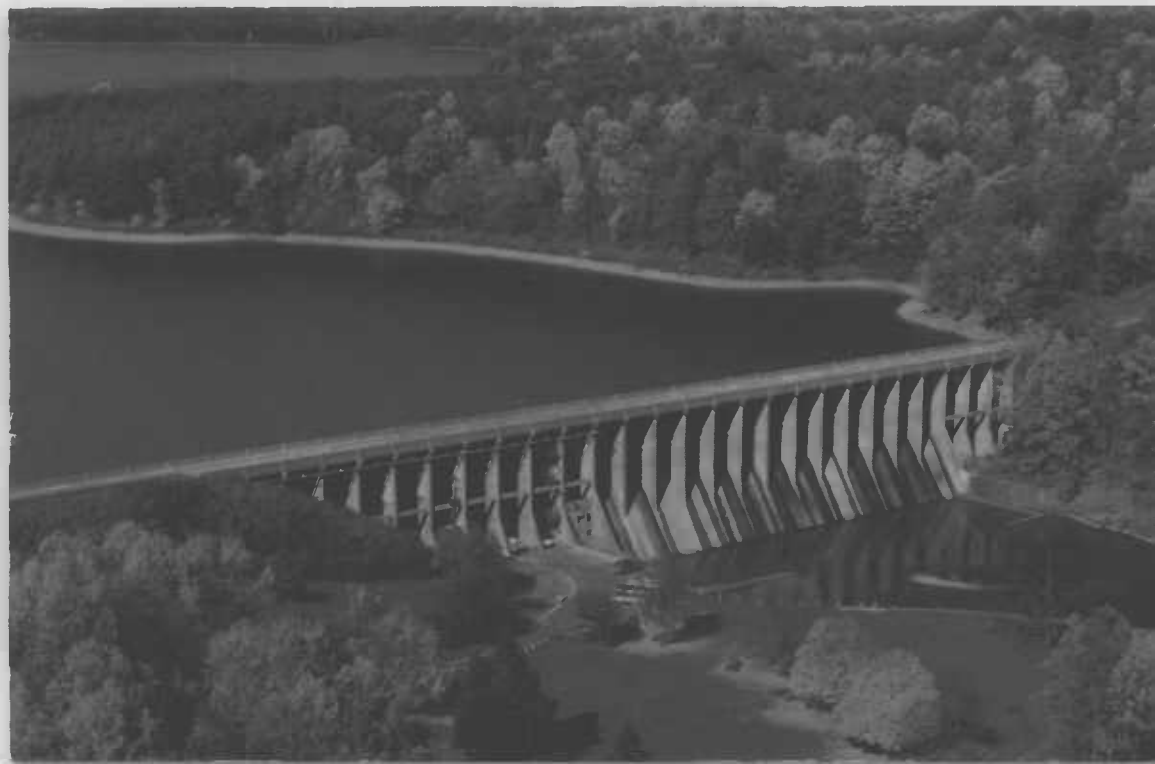
J5


WILLIAM T. NUGENT
788
BRIGHTON-SUNSHINE RD.
GREEN BRIDGE
GEORGE LINCOLN
HORACE LEISHEAR
EDWIN A. MERRITT
980
C.H. McLEOD
part of Prop. Sold to Mo Co 2463/220
A. PRISCILLA BROWN
W.T. NUGENT ET. TRUSTEES
20" Gas Line
WALTER F. WILSON
SRC Plats 21345-46
River
CARL O. FIS.
AUGUSTUS STABLER
100' R.O.W. Elow Road
ABEL AND HARRY GLICKMAN
821
Nichols
Green Bridge
955
Patuxent
JOHN N. HOWARD
LIBER 172 FOLIO 309
ISABELL B. JONES
MARY B. HUTTON
1.234 AC to USA, Lawless
GREEN BRIDGE RD.
787
SIDNEY S. STABLER
LIBER 851 FOLIO 353
Brighton Dam
COUNTY COMM. J.M. THORTON ASKIN
D. THOMPSON
J.H. KOSH
LAIN ET AL 786
MAURICE J. STABLER
FRANCES F. WATERS
GEORGE THOMPSON
AUGUSTUS STABLER
FRANCIS L. AND T. GUY NICHOLS
J. ARLEY ROBISON
—: NOTE :—
All Detail (Roads, Houses, Property Lines, River & Stream Beds) Shown within the W.S.S.D. "Taking Line" is now non existant
GRANTORS
SIDNEY S. STABLER
JOHN N. HOWARD
M:23-128



BRIGHTON DAM BROOKEVILLE

MONTGOMERY AND HOWARD COUNTIES
QUADRANGLE "SANDY SPRING,MD."



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BRIGHTON DAM - TRIADELPHIA RESERVOIR
WASHINGTON SUBURBAN SANITARY COMMISSION

The WSSC's Brighton Dam, completed in 1943, impounds the Patuxent River along the border of Montgomery and Howard Counties. Triadelphia Reservoir is one of three reservoirs operated by the WSSC to help meet suburban Maryland's public water needs.

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Post Card

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